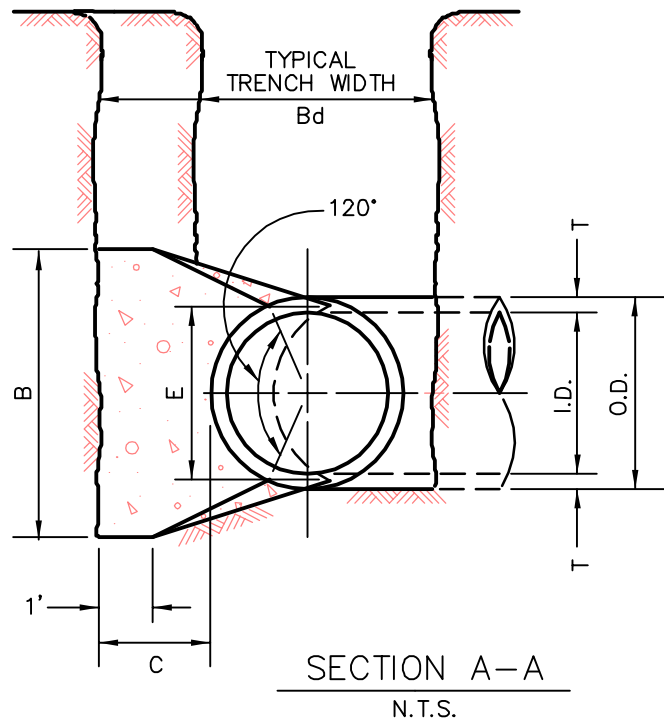
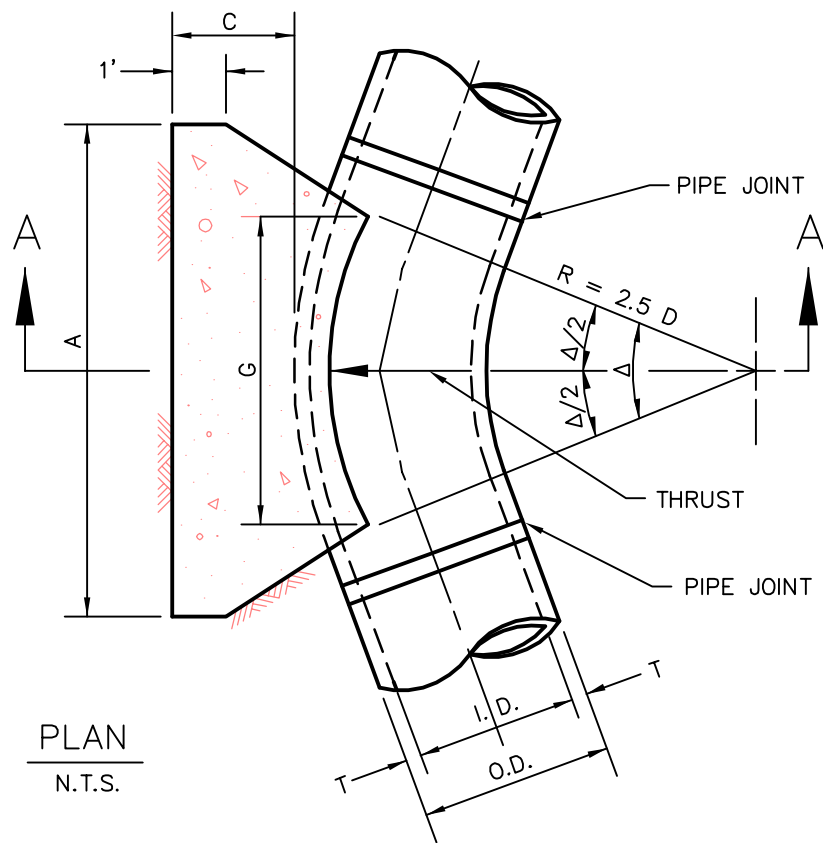


PATH: s:\Standard_Details\New_Details_modified\SDCoppel2005.dwg



I.D. (IN.)	T (IN.)	$\Delta = 11.25^\circ$ (FT.)	$\Delta \geq 22.50^\circ$ (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

I.D. (IN.)	Δ = 11.25°								I.D. (IN.)	Δ= 22.50°							
	G (FT.)	THRUST (TONS)	EARTH			ROCK				G (FT.)	THRUST (TONS)	EARTH			ROCK		
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.0	0.4
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

TABLES OF DIMENSIONS AND QUANTITIES

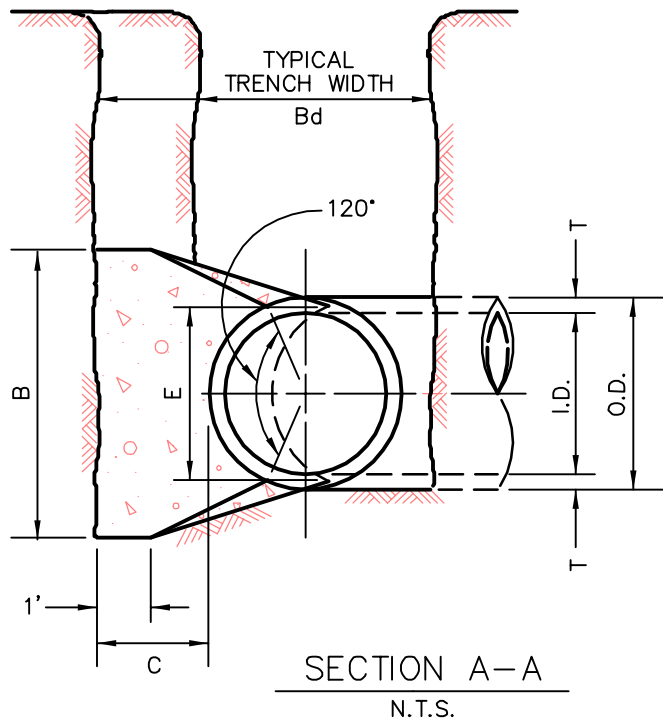
REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD
DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS HORIZONTAL THRUST BLOCK AT PIPE BEND CITY OF COPPELL DALLAS COUNTY, TEXAS	STD. SPEC. REFERENCE 303., 502. STANDARD DETAIL 4010-1
NO.	LOCAL EXCEPTION		BY	DATE		



I.D. (IN.)	T (IN.)	$\Delta =$ 11.25° (FT.)	$\Delta \cong$ 22.50° (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.


I.D. (IN.)	$\Delta = 30^\circ$								I.D. (IN.)	$\Delta = 45^\circ$							
	G (FT.)	THRUST (TONS)	EARTH			ROCK				G (FT.)	THRUST (TONS)	EARTH			ROCK		
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4,6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

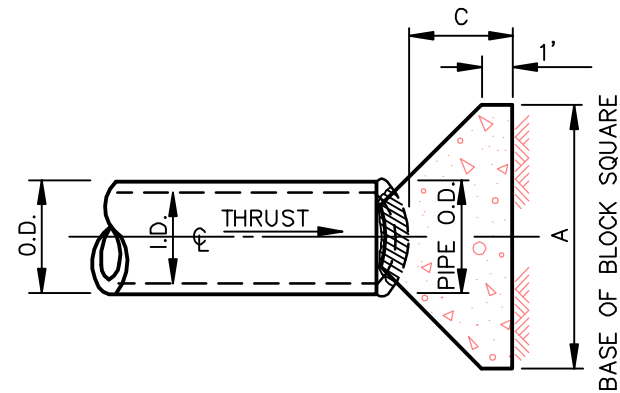
I.D. (IN.)	Δ = 67.50°								I.D. (IN.)	Δ = 90°							
	G (FT.)	THRUST (TONS)	EARTH			ROCK				G (FT.)	THRUST (TONS)	EARTH			ROCK		
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4,6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16,18	4.7	28.3	7.5	4.0	1.9	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	4.0	3.3
36	9.4	84.9	14.5	6.0	8.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.9	299.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	46.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	28.4	72	23.8	431.8	36.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.5	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	94.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	138.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0	95.1

TABLES OF DIMENSIONS AND QUANTITIES



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

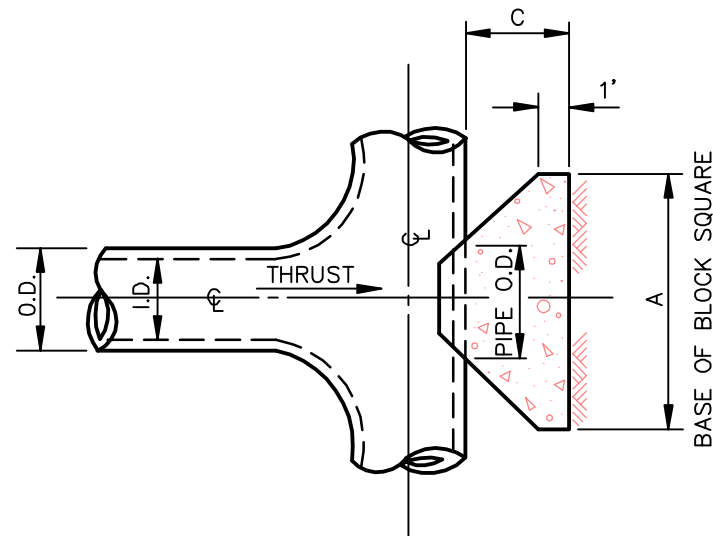
					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE
					HORIZONTAL THRUST BLOCK	303., 502.
					AT PIPE BEND	STANDARD DETAIL
						4010-2
NO.	LOCAL EXCEPTION	BY	DATE		CITY OF COPPELL DALLAS COUNTY, TEXAS	



PLAN OF PLUG THRUST BLOCK

N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.



PLAN OF TEE THRUST BLOCK

N.T.S.

			EARTH		ROCK	
I.D. (IN.)	THRUST (TONS)	C (FT.)	A (FT.)	VOL. (C.Y.)	A (FT.)	VOL. (C.Y.)
4,6,8	5.1	1.5	2.5	0.3	2.0	0.2
10,12	11.3	1.5	3.5	0.6	2.5	0.3
16,18	25.5	2.0	5.5	1.6	4.0	0.9
20	31.5	2.0	6.0	1.9	4.0	0.9
24	45.2	2.5	7.0	3.1	5.0	1.7
30	53.0	3.0	7.5	4.1	5.5	2.4
36	76.3	4.0	9.0	7.3	6.5	4.2
42	104.0	4.5	10.5	11.0	7.5	6.2
48	136.0	5.0	12.0	15.6	8.5	8.7
54	172.0	5.5	13.5	21.4	9.5	11.9
60	212.0	6.0	15.0	28.4	10.5	15.7
66	257.0	6.5	16.5	36.8	11.5	20.5
72	305.0	7.5	17.5	47.2	12.5	27.2
78	358.0	8.0	19.0	58.9	13.5	33.7
84	416.0	8.5	20.5	72.3	14.5	41.2
90	477.0	9.0	22.0	87.7	15.5	49.7
96	543.0	9.5	23.5	104.8	16.5	61.0

TABLE OF DIMENSIONS AND QUANTITIES

North Central Texas Council of Governments

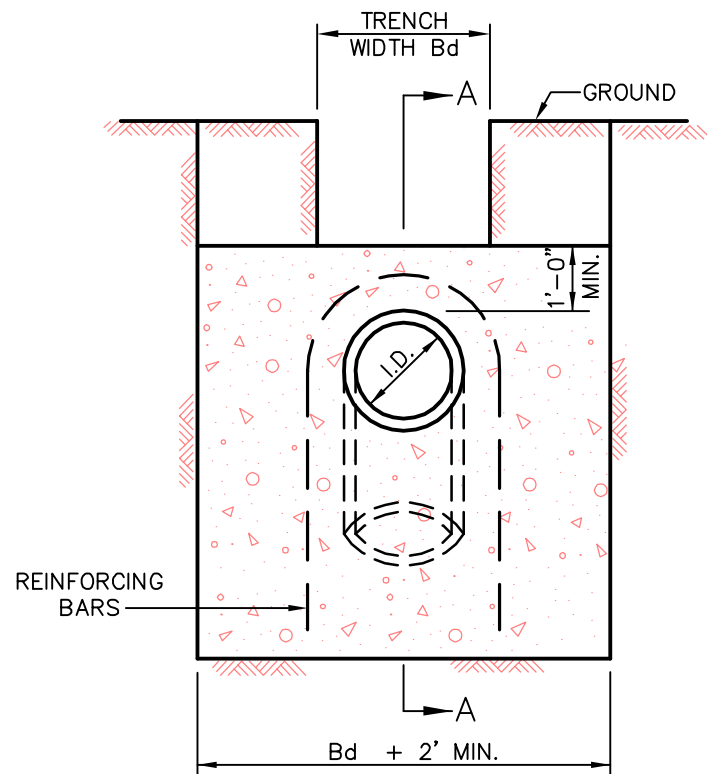


NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD
DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

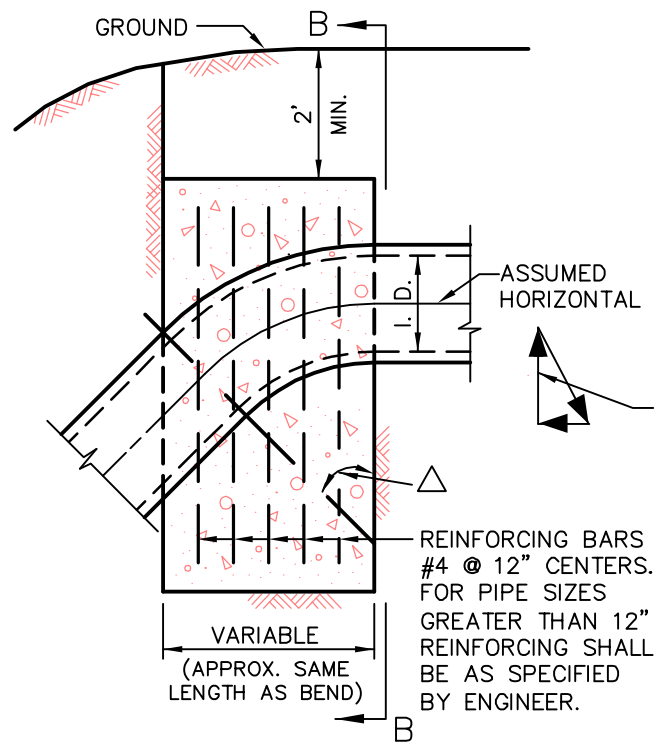
					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 303., 502. STANDARD DETAIL 4020
					HORIZONTAL THRUST BLOCK AT TEES AND PLUGS	
					CITY OF COPPELL DALLAS COUNTY, TEXAS	
NO.	LOCAL EXCEPTION	BY	DATE			

PATH: s:\Standard_Details\New_Deta_modified\SDCoppel2005.dwg

PATH: S:\Standard_Details\New_Deta_modified\SDCoppel12005.dwg



VIEW B-B
N.T.S.



SECTION A-A
N.T.S.

VERTICAL COMPONENT
OF THRUST =
TABULATED VALUE

Δ →	11.25°		22.50°		30°		45°		67.50°		90°		← Δ
I.D. (IN.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	I.D. (IN.)
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12
16,18	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	25.5	12.7	16,18
20	6.1	3.1	12.0	6.0	15.7	7.9	22.2	11.1	29.2	14.5	31.4	15.7	20
24	8.2	4.4	17.3	8.7	22.6	11.3	32.0	16.0	41.8	20.9	45.2	22.6	24
30	10.5	5.2	20.3	10.1	26.5	13.3	37.5	18.8	49.0	24.5	53.1	26.5	30
36	14.9	7.5	29.2	14.6	38.2	19.1	54.0	27.0	70.5	35.3	76.4	38.2	36
42	20.3	10.1	39.8	19.9	52.0	26.0	73.5	36.7	96.0	48.0	104.0	52.0	42
48	26.5	13.2	51.9	26.0	67.9	33.9	96.0	48.0	126.0	62.7	136.0	67.9	48
54	33.5	16.8	65.7	32.9	85.9	42.9	122.0	60.7	159.0	79.4	172.0	85.9	54
60	41.4	20.7	81.2	40.6	106.0	53.0	150.0	75.0	196.0	98.0	212.0	106.0	60
66	50.1	25.0	98.2	49.1	128.0	64.2	182.0	90.7	237.0	119.0	257.0	128.0	66
72	59.6	29.8	117.0	58.4	153.0	76.3	216.0	108.0	282.0	141.0	305.0	153.0	72
78	69.9	35.0	137.0	68.6	179.0	90.0	254.0	127.0	331.0	166.0	358.0	179.0	78
84	81.1	40.5	159.0	79.5	208.0	104.0	294.0	147.0	384.0	192.0	416.0	208.0	84
90	93.1	46.5	183.0	91.3	239.0	119.0	337.0	169.0	441.0	221.0	477.0	239.0	90
96	106.0	53.0	208.0	104.0	272.0	136.0	384.0	192.0	502.0	251.0	543.0	272.0	96

TABLE OF DIMENSIONS AND QUANTITIES

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD
DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 303., 502.
					VERTICAL THRUST BLOCK AT PIPE BEND	
NO.	LOCAL EXCEPTION	BY	DATE		CITY OF COPPELL DALLAS COUNTY, TEXAS	

GENERAL NOTES FOR ALL THRUST BLOCKS:

- 1. CONCRETE FOR BLOCKING SHALL BE CLASS "B".
- 2. ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR DUCTILE IRON, P.V.C., AND 150 PSI FOR CONCRETE PIPE.
- 3. VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
- 4. WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
- 5. POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
- 6. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
- 7. THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
- 8. USE POLYETHYLENE WRAP OR APPROVED EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT CONCRETE FROM ADHERING TO IT.
- 9. CONCRETE SHALL NOT EXTEND BEYOND JOINTS.

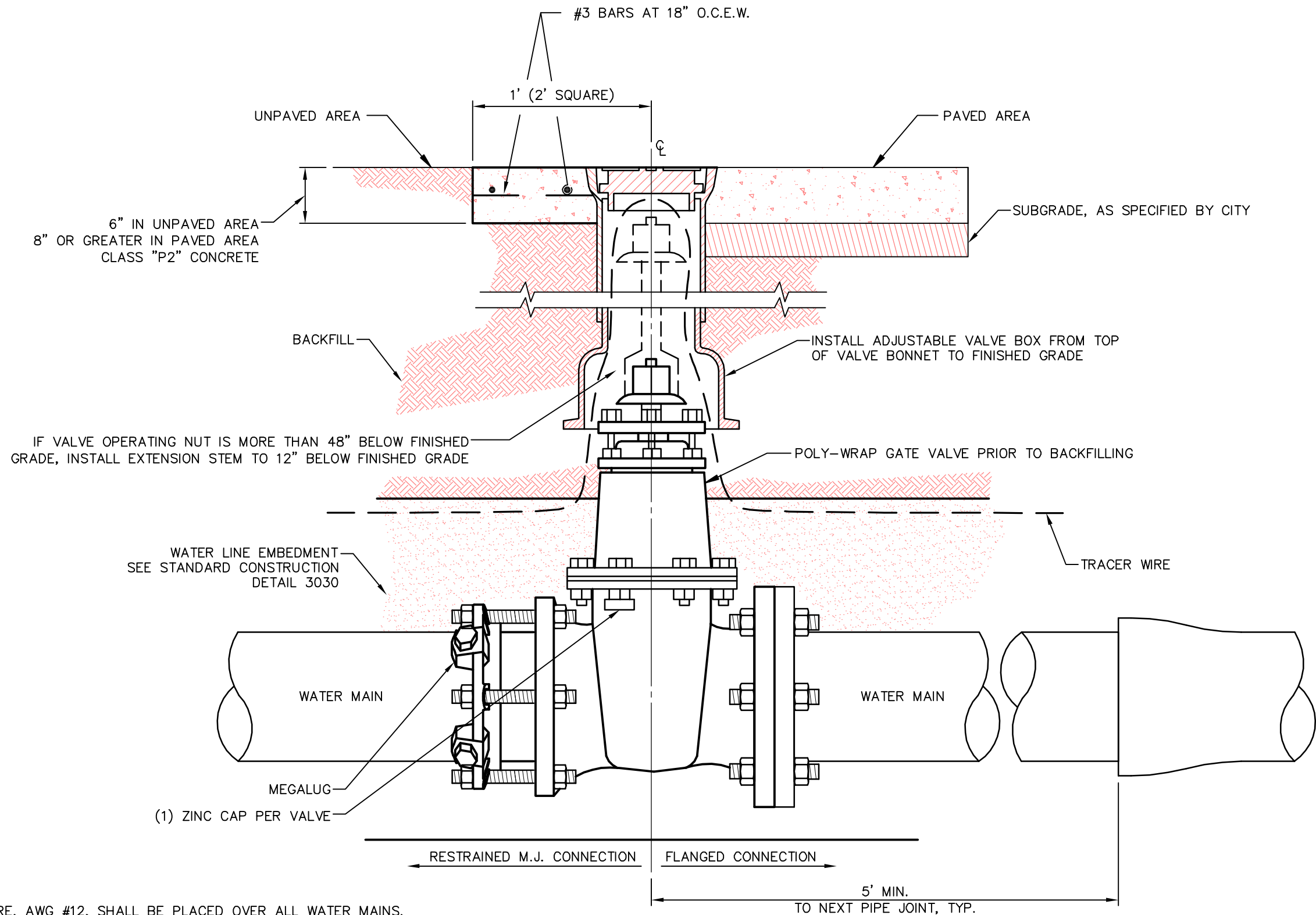
North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 502., 702.
					THRUST BLOCK GENERAL NOTES	
					CITY OF COPPELL DALLAS COUNTY, TEXAS	STANDARD DETAIL 4040
NO.	LOCAL EXCEPTION	BY	DATE			

PATH: s:\Standard_Details\New_Dets_modified\SDCoppel2005.dwg



NOTES:


1. BLUE TRACER WIRE, AWG #12, SHALL BE PLACED OVER ALL WATER MAINS.
2. IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220.

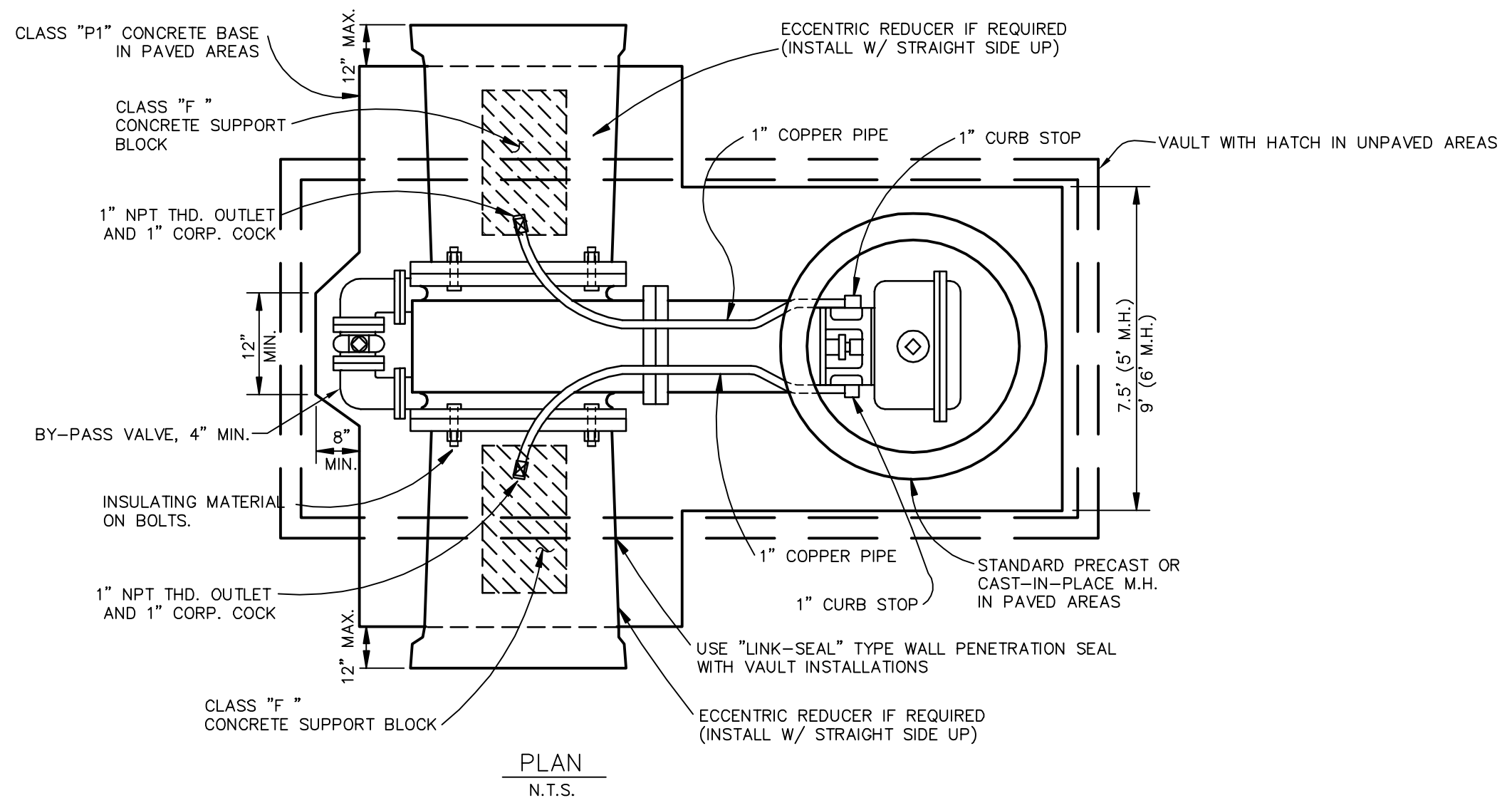
North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

GATE VALVE, VALVE BOX AND EXTENSION STEM
N.T.S.


					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 303., 502. STANDARD DETAIL 4050
					GATE VALVE 4" TO 12" INSTALLATION	
					CITY OF COPPELL DALLAS COUNTY, TEXAS	
NO.	LOCAL EXCEPTION	BY	DATE			

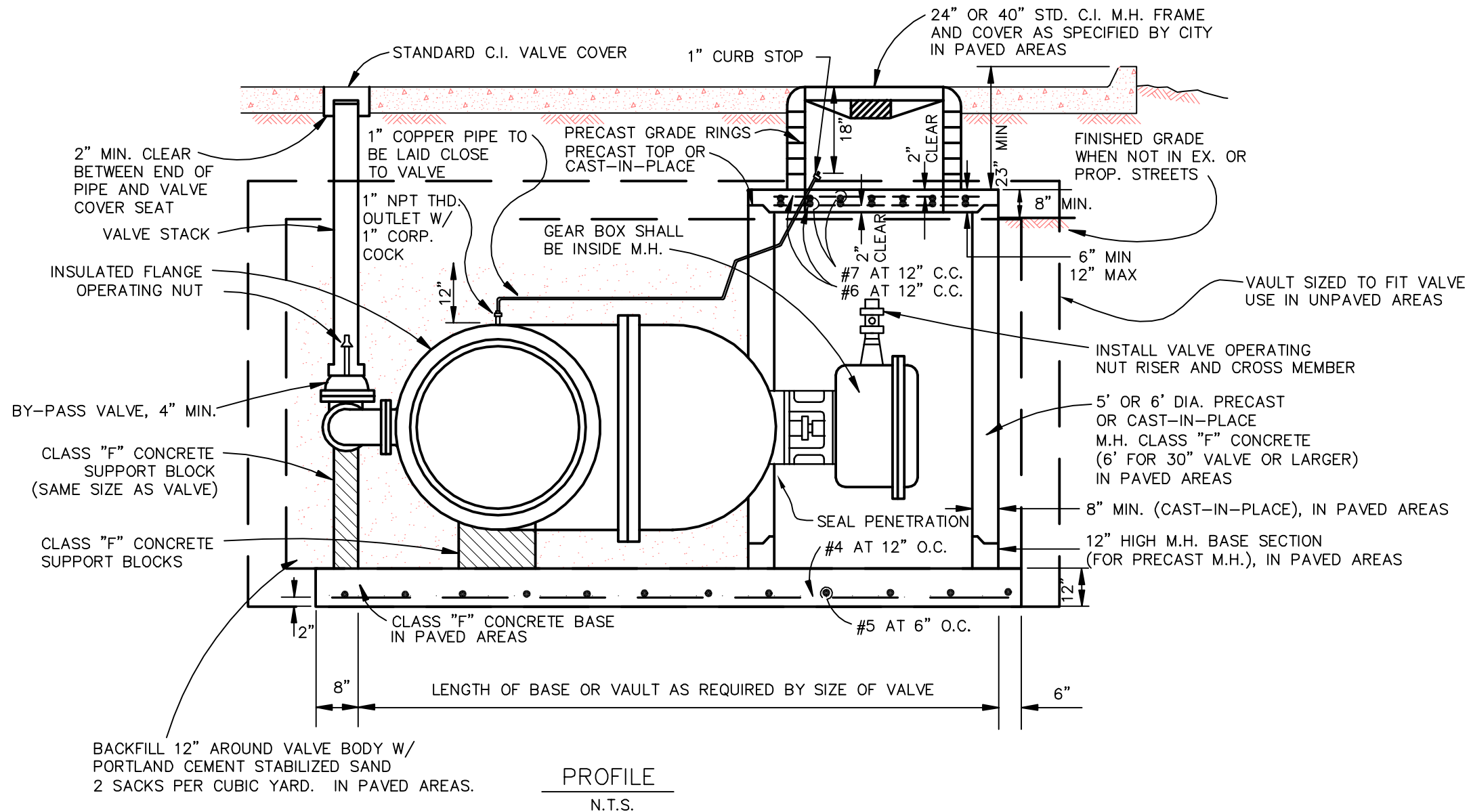


NOTE: IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 303., 502.
					VAULT CONSTRUCTION HORIZONTAL GATE VALVE 16" OR LARGER	
					CITY OF COPPELL DALLAS COUNTY, TEXAS	STANDARD DETAIL 4060-1
NO.	LOCAL EXCEPTION	BY	DATE			




NOTE: IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220

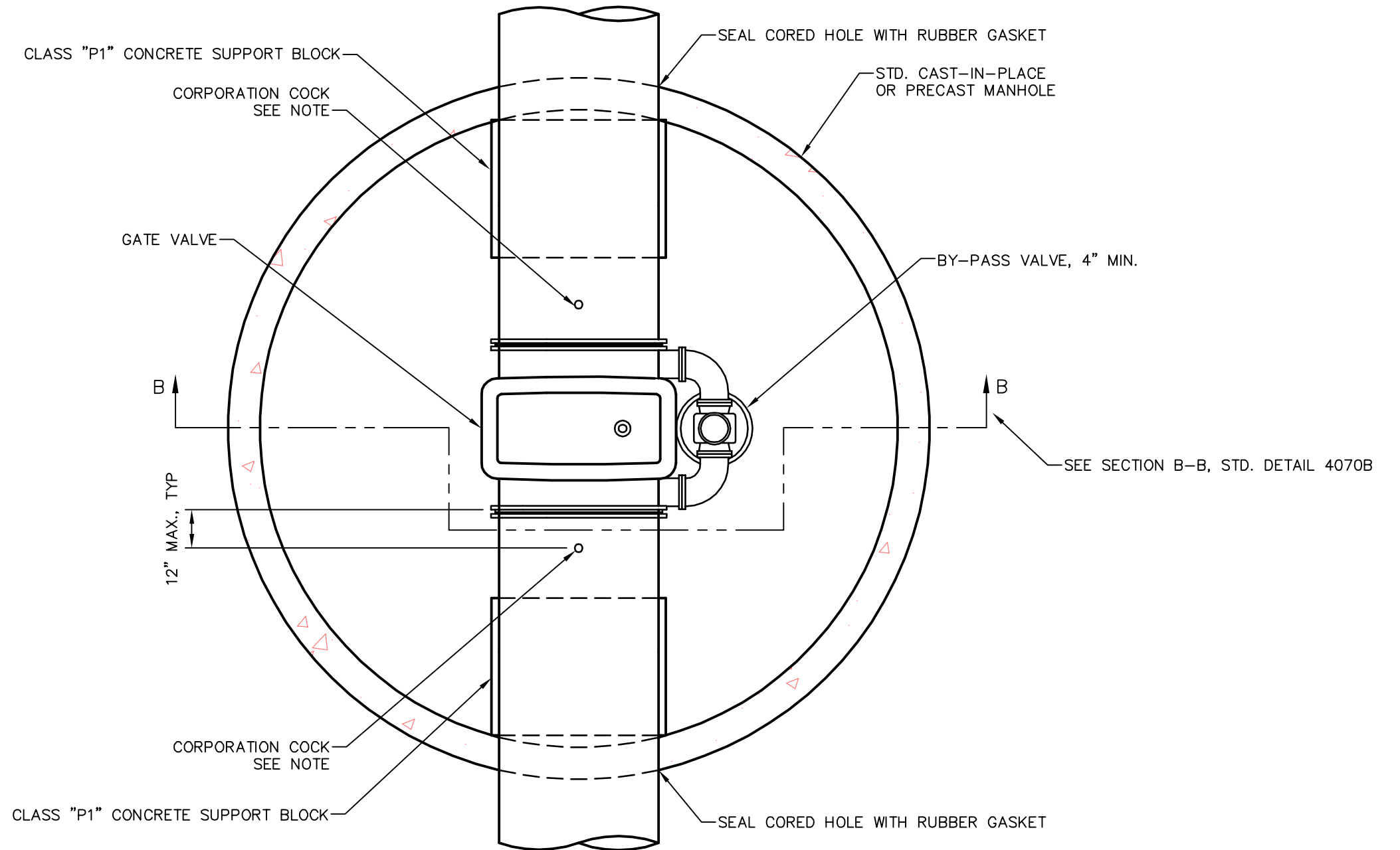
North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 303., 502.
					VAULT CONSTRUCTION HORIZONTAL GATE VALVE 16" OR LARGER	
NO.	LOCAL EXCEPTION	BY	DATE			

PATH: s:\Standard_Details\New_Deta_modified\SDCoppel2005.dwg




NOTES:

1. PROVIDE CORPORATION COCK AND CURB STOPS A MAXIMUM OF 12" FROM EACH END OF GATE VALVE, AS SHOWN. CORPORATION AND CURB STOP SIZES SHALL BE 1" FOR 16", 20", AND 24" NOMINAL PIPE DIAMETERS; 2" FOR 30" AND LARGER DIAMETERS. 2" TAPS SHALL BE MADE AS A 2" FLANGED OUTLET WITH INSULATED ADAPTER KIT. COPPER RISERS SHALL BE PROVIDED BETWEEN THE CORPORATION AND CURB STOPS. CURB STOPS SHALL BE INSTALLED AT AN ELEVATION 12" ABOVE THE TOP SURFACE OF MANHOLE BOTTOM.
2. IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220.

North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 502.
					VAULT CONSTRUCTION	
					VERTICAL GATE VALVE 16" OR LARGER	STANDARD DETAIL 4070-1
					CITY OF COPPELL DALLAS COUNTY, TEXAS	
NO.	LOCAL EXCEPTION	BY	DATE			

PATH: S:\Standard_Details\New_Deta_modified\SDCoppel2005.dwg

North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

NO.	LOCAL EXCEPTION	BY	DATE



STANDARD CONSTRUCTION DETAILS

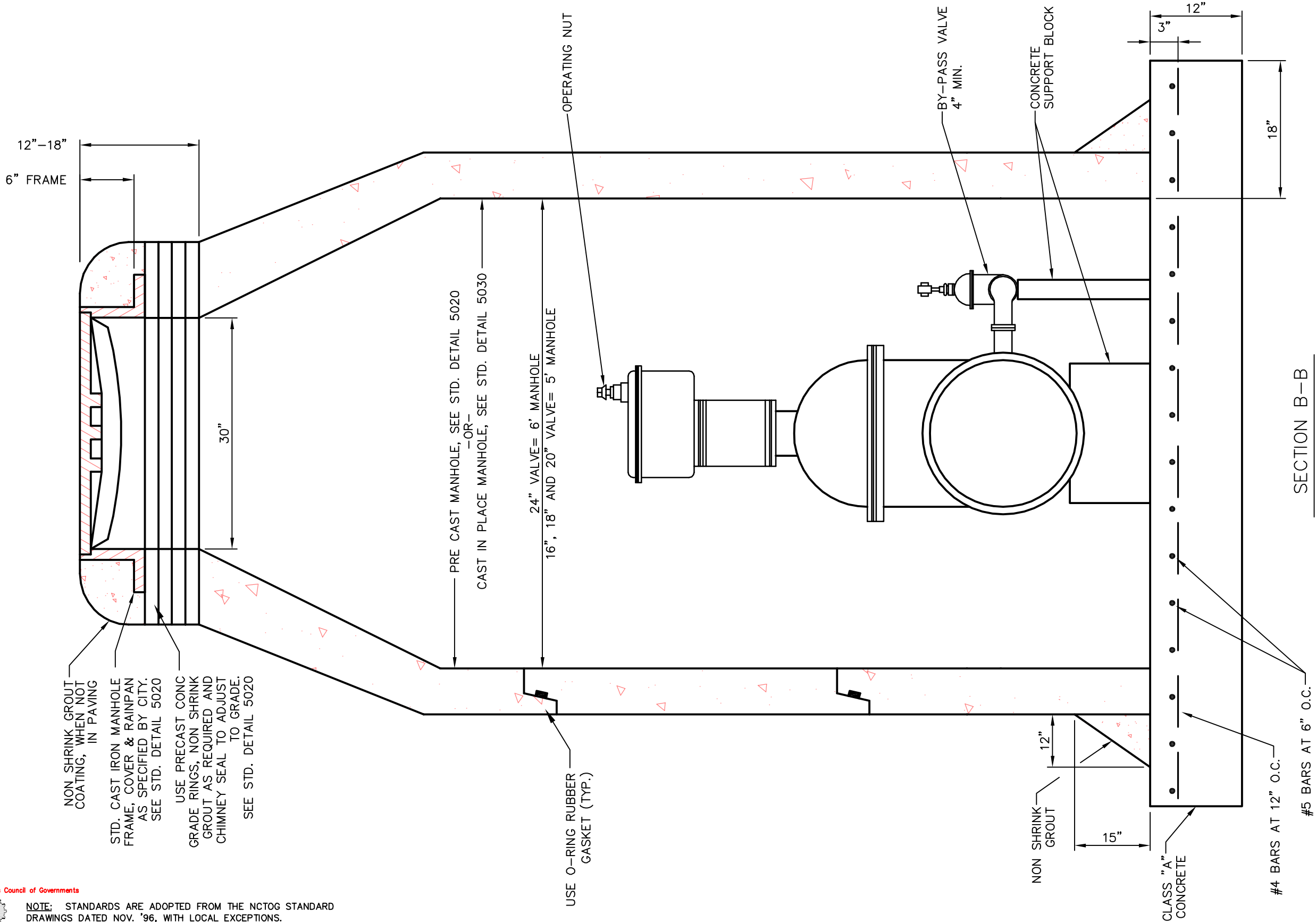
VAULT CONSTRUCTION
VERTICAL GATE VALVE 16" OR LARGER

CITY OF COPPELL DALLAS COUNTY, TEXAS

STD. SPEC.
REFERENCE
303., 502.

STANDARD DETAIL

4070-2

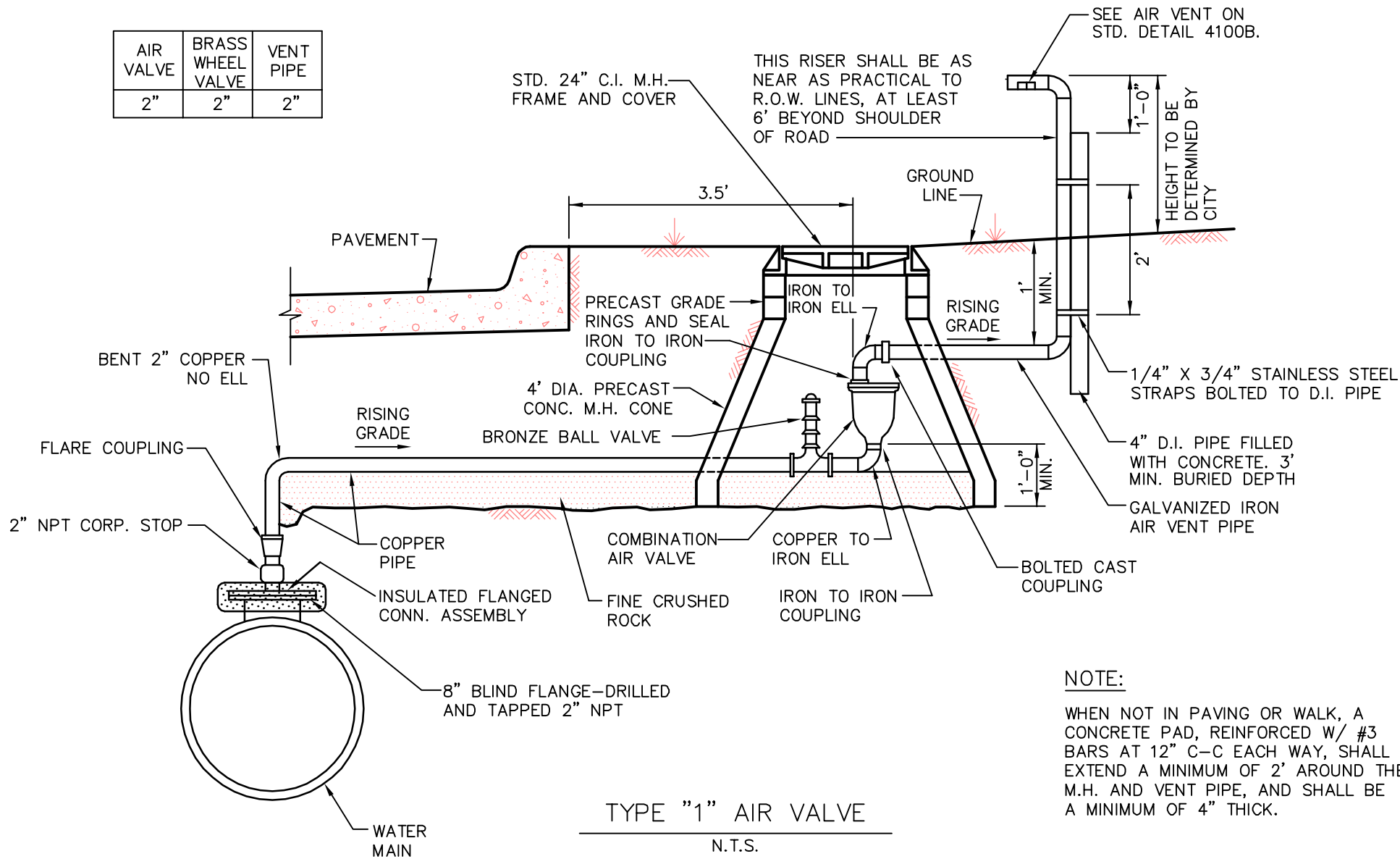


SECTION B-B

N.T.S.

NOTE: IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220

AIR VALVE	BRASS WHEEL VALVE	VENT PIPE
2"	2"	2"




NOTE: IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220

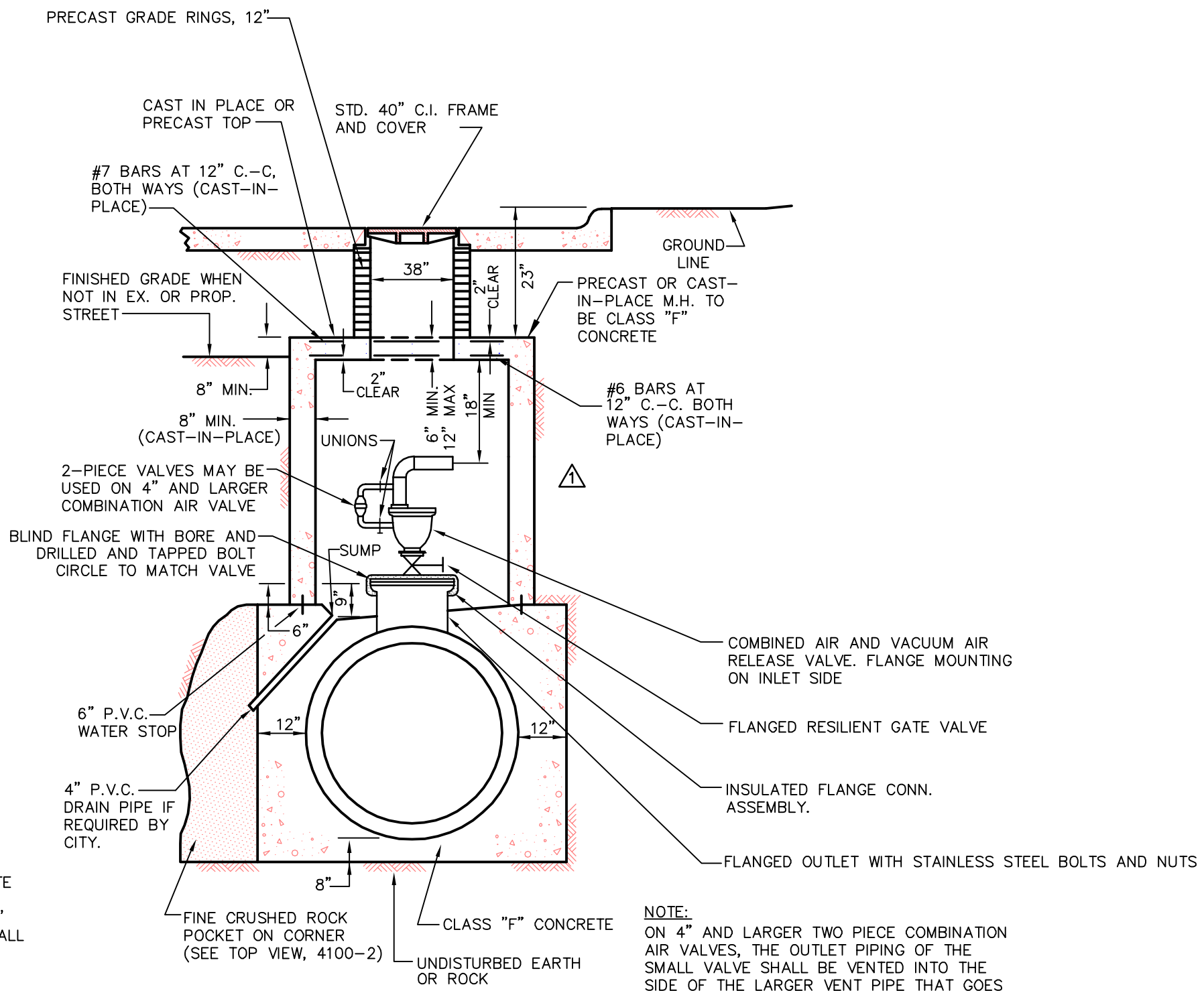
North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

PATH: s:\Standard_Details\New_Deta_modified\SDCoppel2005.dwg

PATH: S:\Standard_						STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 303., 501., 502. STANDARD DETAIL 4090
						AIR RELEASE VALVE	
						TYPE "1"	
	NO.	LOCAL EXCEPTION	BY	DATE			CITY OF COPPELL DALLAS COUNTY, TEXAS



NOTE: IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220

NOTE:
WHEN NOT IN PAVING OR WALK, A CONCRETE PAD REINFORCED W/ #3 BARS AT 12" C-C EACH WAY, SHALL EXTEND A MINIMUM OF 2' AROUND THE M.H. AND VENT PIPE, AND SHALL BE A MINIMUM OF 4" THICK.

NOTE:
ON 4" AND LARGER TWO PIECE COMBINATION AIR VALVES, THE OUTLET PIPING OF THE SMALL VALVE SHALL BE VENTED INTO THE SIDE OF THE LARGER VENT PIPE THAT GOES ABOVE GROUND.



TYPE "2" AIR VALVE
N.T.S.

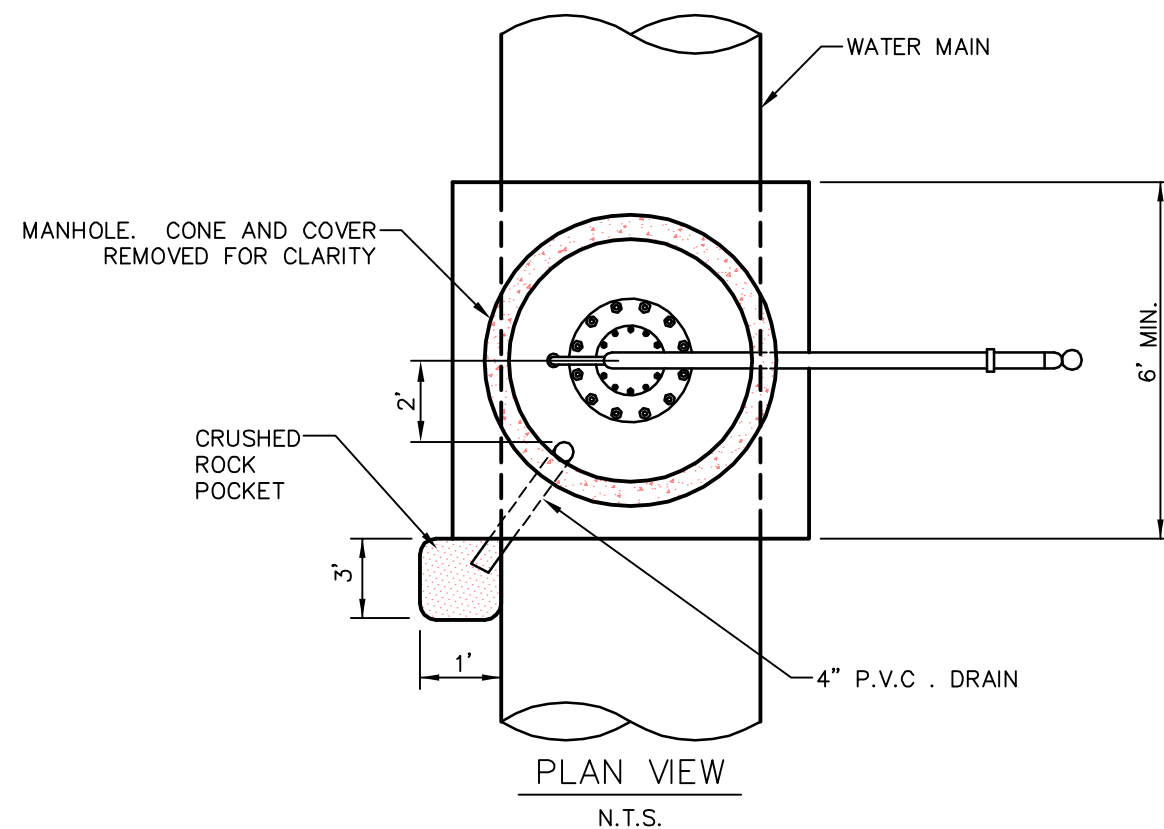
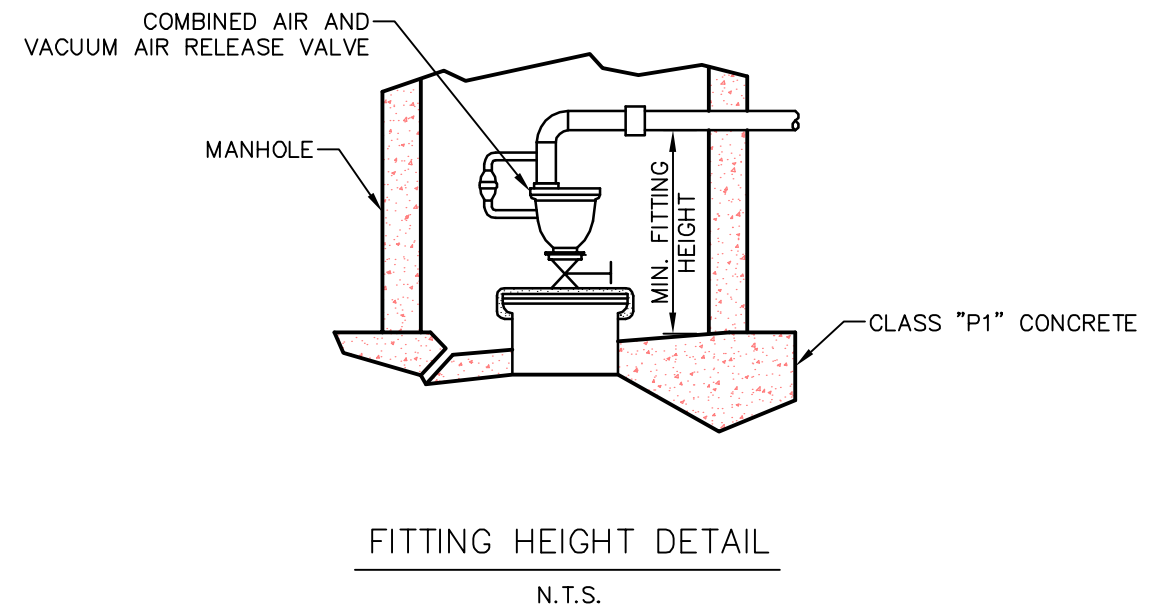
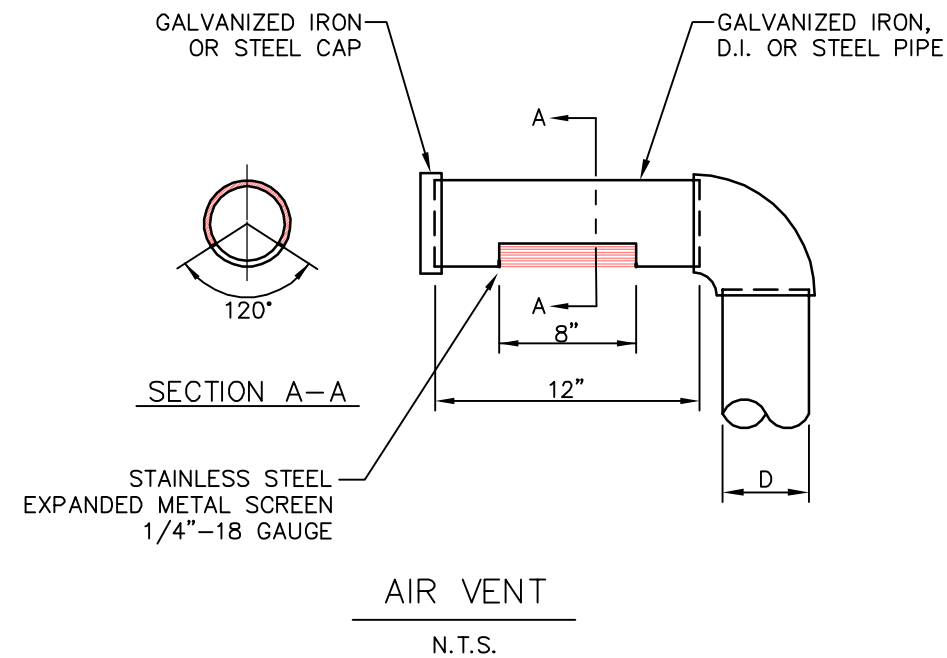
North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

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					STANDARD CONSTRUCTION DETAILS		STD. SPEC. REFERENCE
					AIR RELEASE VALVE		702., 501., 502.
					TYPE "2"		STANDARD DETAIL
					CITY OF COPPELL DALLAS COUNTY, TEXAS		4100-1
	DELETED EXTERNAL AIR VENT.	SWL	JUL. '06				
NO.	LOCAL EXCEPTION	BY	DATE				



AIR VALVE	GATE VALVE	FLG. OUTLET	MIN. FITTING HEIGHT	VENT PIPE D	M.H. DIA.
2"	2"	8"	26"	2"	5'
3"	3"	18"	31"	3"	5'
4"	4"	18"	38"	4"	5'
6"	6"	18"	46"	6"	5'
8"	8"	18"	53"	8"	6'
10"	10"	20"	62"	10"	6'
12"	12"	24"	72"	12"	6'


NOTE: IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220

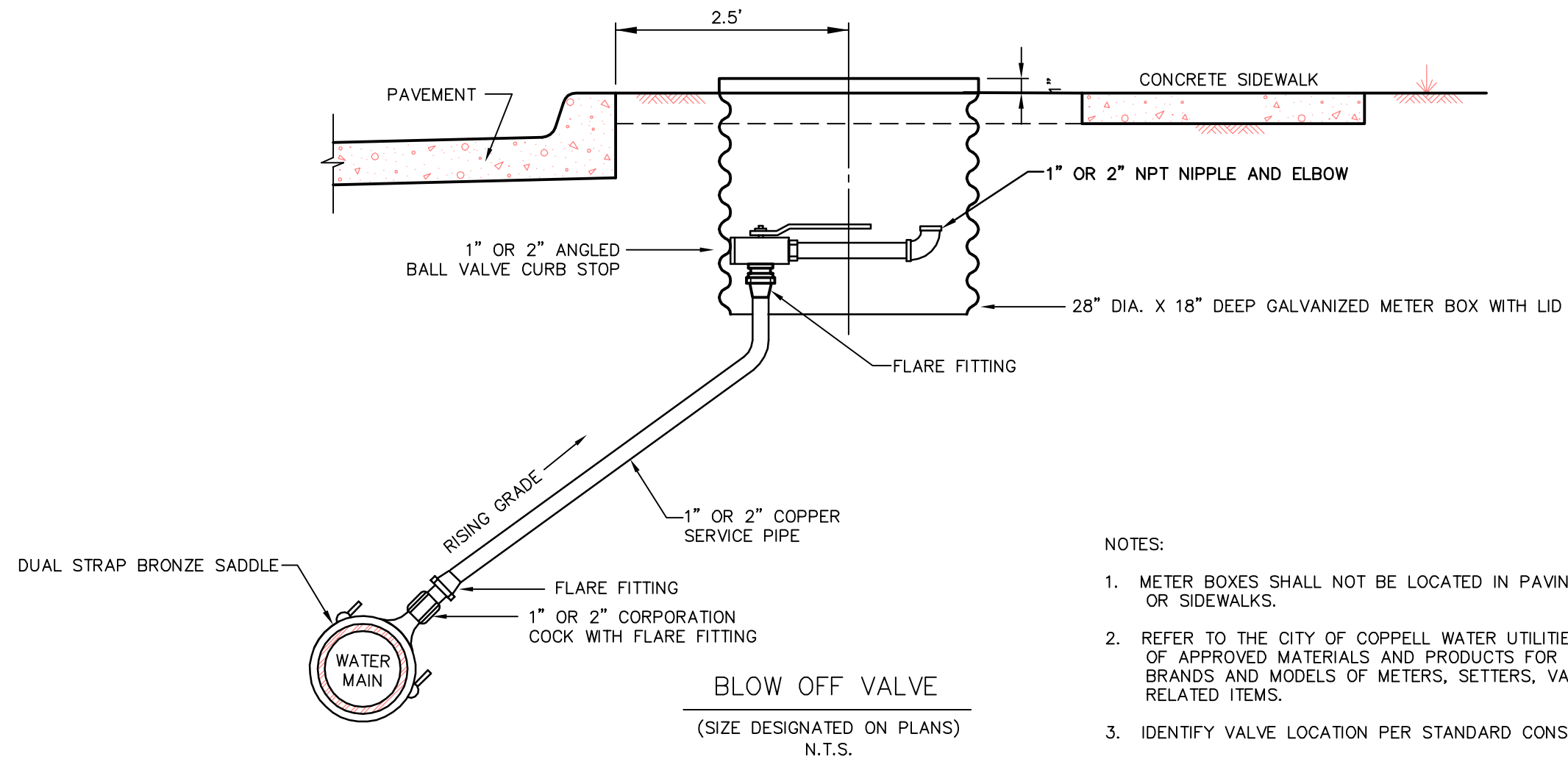
North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

PATH: s:\Standard_Details\New_Deta_modified\SDCoppel2005.dwg

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 303., 501., 502.
					AIR RELEASE VALVE TYPE "2"	
						STANDARD DETAIL 4100-2
NO.	LOCAL EXCEPTION	BY	DATE		CITY OF COPPELL DALLAS COUNTY, TEXAS	




NOTES:

1. METER BOXES SHALL NOT BE LOCATED IN PAVING OR SIDEWALKS.
2. REFER TO THE CITY OF COPPELL WATER UTILITIES LIST OF APPROVED MATERIALS AND PRODUCTS FOR APPROVED BRANDS AND MODELS OF METERS, SETTERS, VALVES AND RELATED ITEMS.
3. IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220.

North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 501., 502. STANDARD DETAIL 4110
					BLOW OFF VALVE INSTALLATION	
					TYPE "1"	
					CITY OF COPPELL DALLAS COUNTY, TEXAS	
NO.	LOCAL EXCEPTION	BY	DATE			

PATH: s:\Standard_Details\New_Deta_modified\SDCoppel2005.dwg



1. IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
2. ALL JOINTS SHALL BE MEGALUG JOINTS.
3. TYPICAL VALVE: ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
4. F.H. NO CLOSER THAN 18" TO EXISTING OR PROPOSED SIDEWALKS.
5. STANDARD BURY DEPTH 5' FEET
6. SET FIRE HYDRANT ON THE LOT LINE EXTENDED WHEN POSSIBLE.
7. F.H. SHALL BE LOCATED MINIMUM 1 FT. OUTSIDE OF THE AREA BETWEEN THE P.C.'S (CURB RETURN) OF THE CORNER TURNING RADII AT INTERSECTIONS. SEE PLAN VIEW ABOVE.
8. IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220.
9. PAINT HYDRANT WITH TWO COATS SHERWIN WILLIAMS ALKYD INDUSTRIAL GLOSS ENAMEL AS FOLLOWS.
PUBLIC HYDRANTS: B54Y37 YELLOW.
PRIVATE HYDRANTS: B54R38 RED
10. REFER TO THE CITY OF COPPELL WATER UTILITIES LIST OF APPROVED MATERIALS AND PRODUCTS FOR APPROVED BRANDS AND MODELS OF HYDRANTS, GATE VALVES AND RELATED ITEMS.

North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.



ADD DIMENSION AND CALLOUT.

NO.

LOCAL EXCEPTION

SWL

UL.

DATE _____



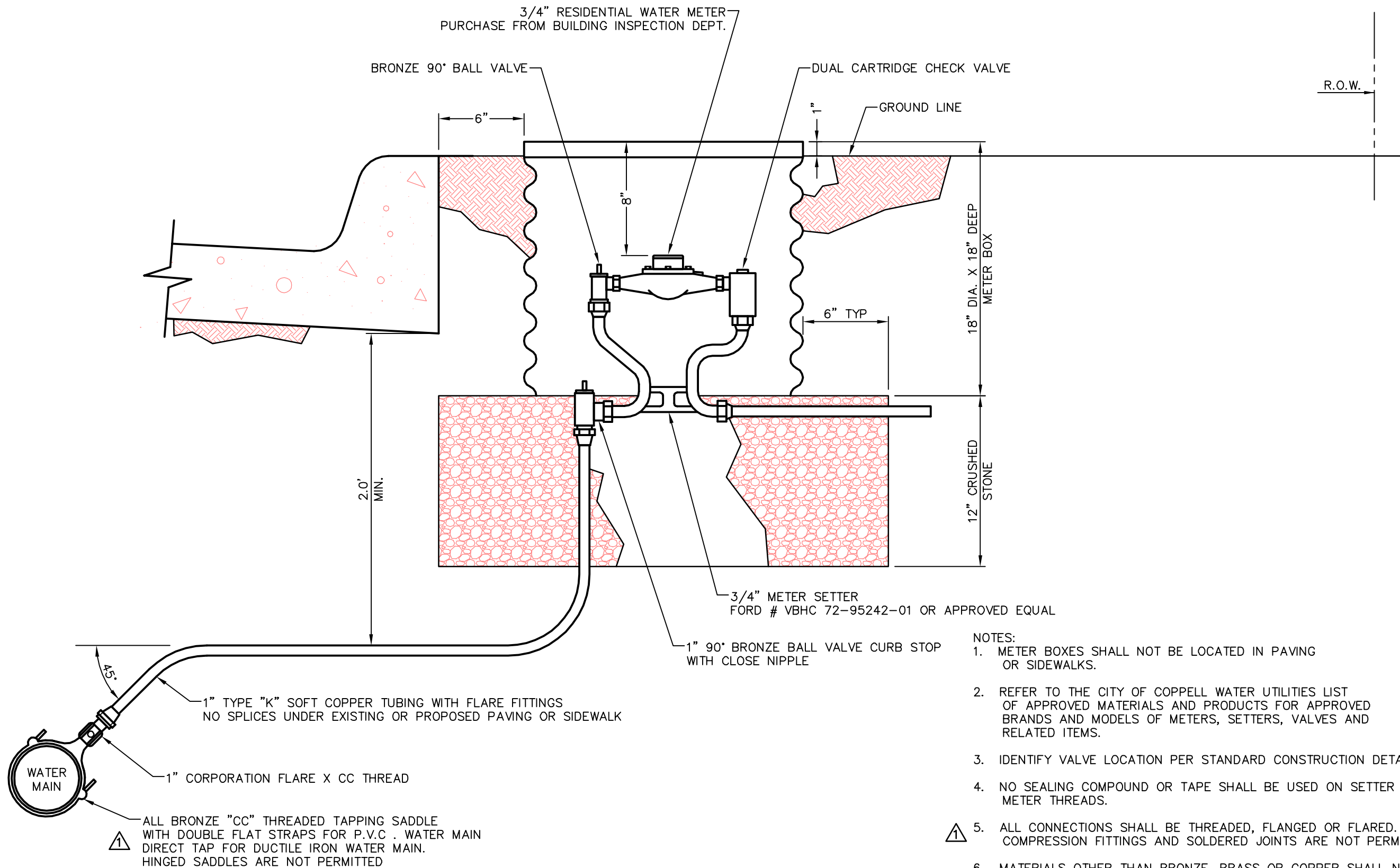
STANDARD CONSTRUCTION DETAILS

FIRE HYDRANT INSTALLATION

CITY OF COPPELL DALLAS COUNTY, TEXAS

STD. SPEC.
REFERENCE
303., 501., 502.
STANDARD DETAIL

4120




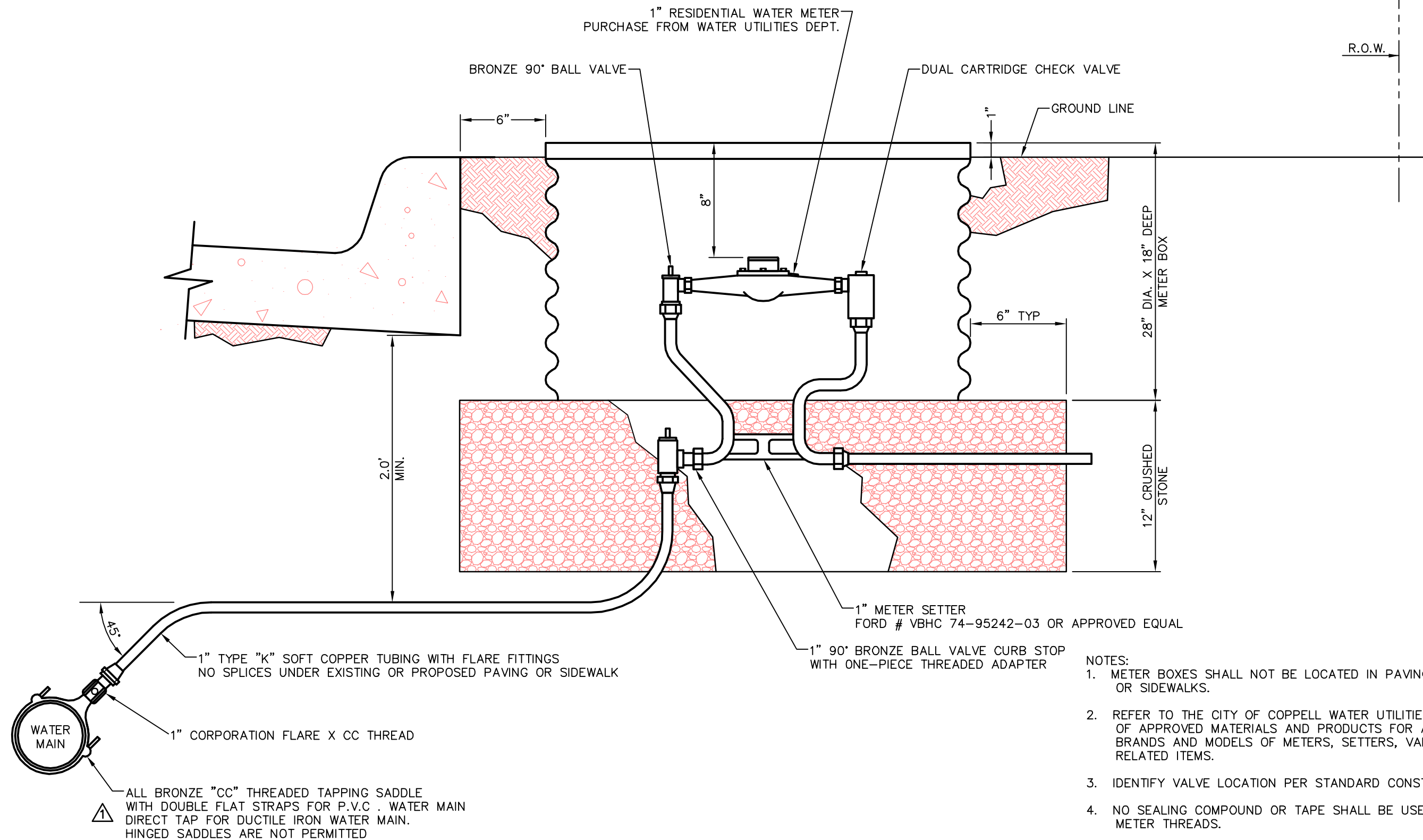
- NOTES:
1. METER BOXES SHALL NOT BE LOCATED IN PAVING OR SIDEWALKS.
 2. REFER TO THE CITY OF COPPELL WATER UTILITIES LIST OF APPROVED MATERIALS AND PRODUCTS FOR APPROVED BRANDS AND MODELS OF METERS, SETTERS, VALVES AND RELATED ITEMS.
 3. IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220.
 4. NO SEALING COMPOUND OR TAPE SHALL BE USED ON SETTER OR METER THREADS.
 5. ALL CONNECTIONS SHALL BE THREADED, FLANGED OR FLARED. COMPRESSION FITTINGS AND SOLDERED JOINTS ARE NOT PERMITTED.
 6. MATERIALS OTHER THAN BRONZE, BRASS OR COPPER SHALL NOT BE PERMITTED.

North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

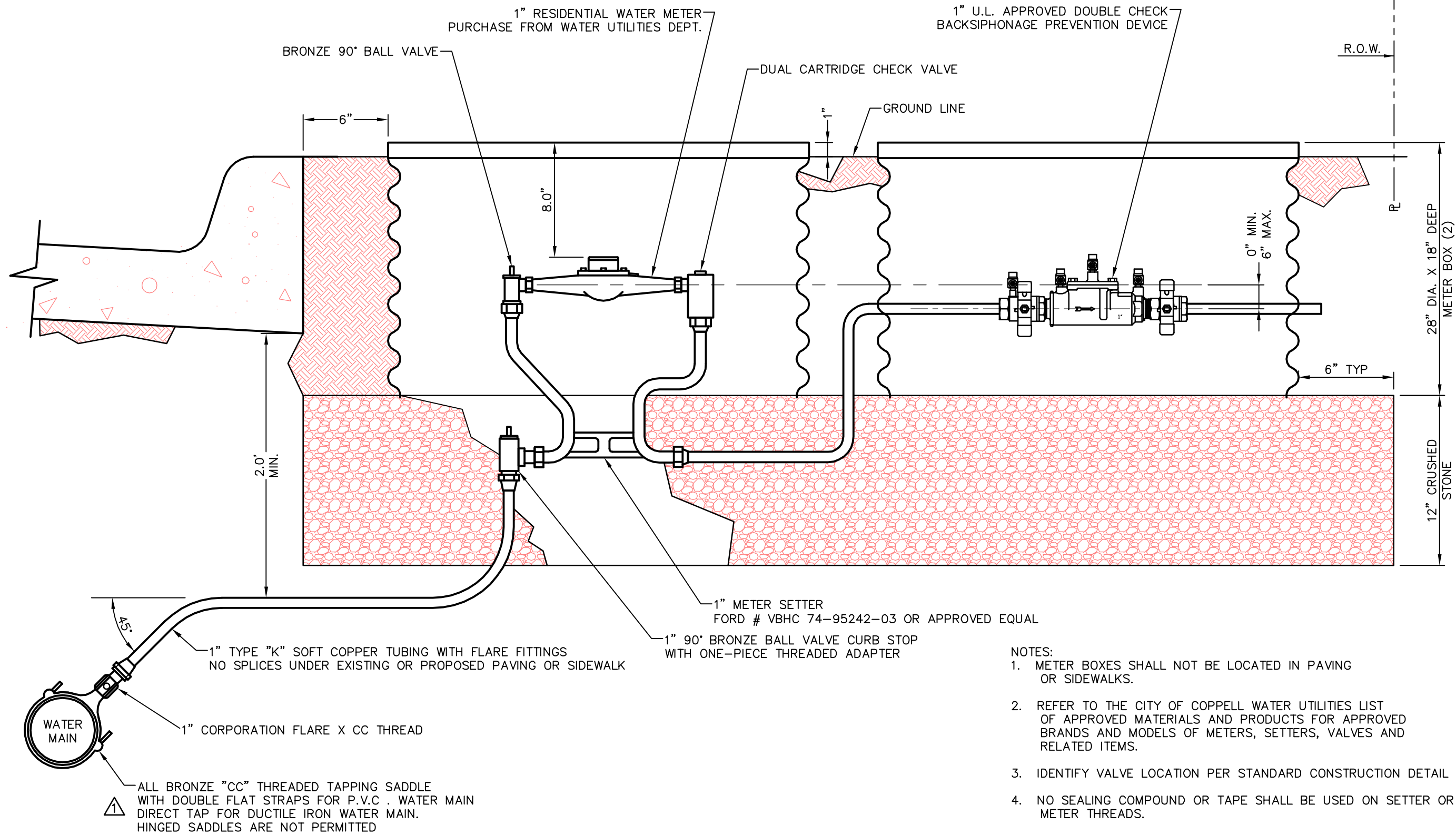
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PATH: S:\Standard_						STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE
						WATER SERVICE INSTALLATION - DOMESTIC	501., 502., 504.
						3/4" METER	STANDARD DETAIL
							4130



North Central Texas Council of Governments

					STANDARD CONSTRUCTION DETAILS WATER SERVICE INSTALLATION - DOMESTIC 1" METER	STD. SPEC. REFERENCE 501., 502., 504.
					CITY OF COPPELL DALLAS COUNTY, TEXAS	STANDARD DETAIL 4140
	MODIFY CALLOUT AND NOTE 5.	SWL	JUL. '06			
NO.	LOCAL EXCEPTION	BY	DATE			





- NOTES:
- METER BOXES SHALL NOT BE LOCATED IN PAVING OR SIDEWALKS.
 - REFER TO THE CITY OF COPPELL WATER UTILITIES LIST OF APPROVED MATERIALS AND PRODUCTS FOR APPROVED BRANDS AND MODELS OF METERS, SETTERS, VALVES AND RELATED ITEMS.
 - IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220.
 - NO SEALING COMPOUND OR TAPE SHALL BE USED ON SETTER OR METER THREADS.
 - ALL CONNECTIONS SHALL BE THREADED, FLANGED OR FLARED. COMPRESSION FITTINGS AND SOLDERED JOINTS ARE NOT PERMITTED.
 - MATERIALS OTHER THAN BRONZE, BRASS OR COPPER SHALL NOT BE PERMITTED.

North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 501., 502., 504.
					WATER SERVICE INSTALLATION - IRRIGATION	
					1" METER	STANDARD DETAIL
	MODIFY CALLOUT AND NOTE 5.	SWL	JUL. '06			4145
NO.	LOCAL EXCEPTION	BY	DATE		CITY OF COPPELL DALLAS COUNTY, TEXAS	

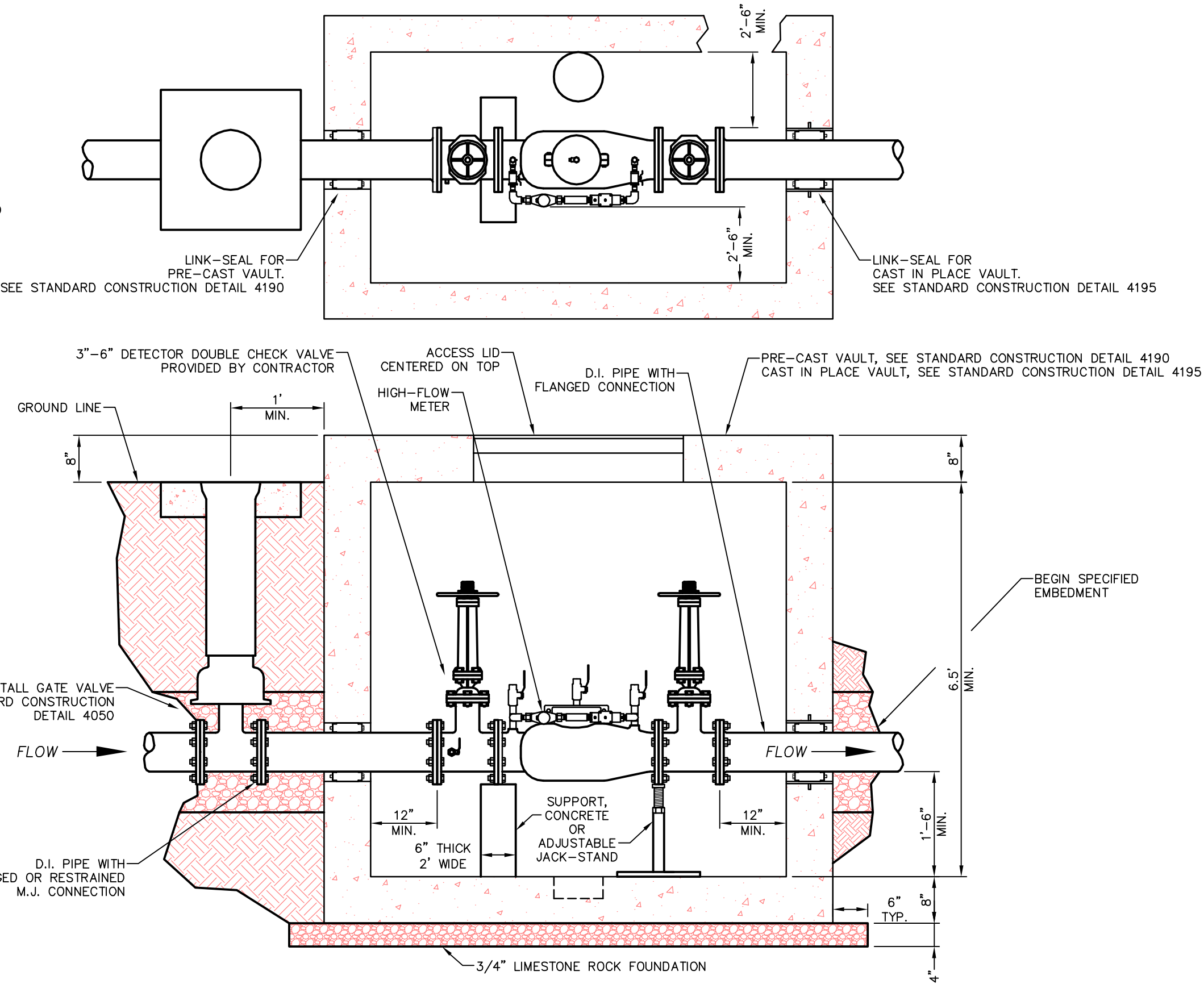
MODIFY CALLOUT AND NOTE 5.

SWL JUL. '06
BY DATE

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NOTES:

- 1. ALL PIPING INSIDE THE VAULT SHALL BE DUCTILE IRON WITH FLANGED FITTINGS.
- 2. THE DETECTOR CHECK VALVE SHALL BE PROVIDED BY THE CONTRACTOR AND MEET THE STANDARDS SET FORTH IN THE CITY OF COPPELL ENGINEERING DEPARTMENT LIST OF APPROVED PRODUCTS AND MATERIALS FOR PUBLIC WORKS CONSTRUCTION.
- 3. REFER TO THE CITY OF COPPELL WATER UTILITIES LIST OF APPROVED MATERIALS AND PRODUCTS FOR APPROVED BRANDS AND MODELS OF GATE VALVES AND RELATED FITTINGS.
- 4. VAULT AND GATE VALVE SHALL BE LOCATED WITHIN A DEDICATED UTILITY EASEMENT OR WITHIN THE PUBLIC RIGHT OF WAY.
- 5. IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220.




North Central Texas Council of Governments



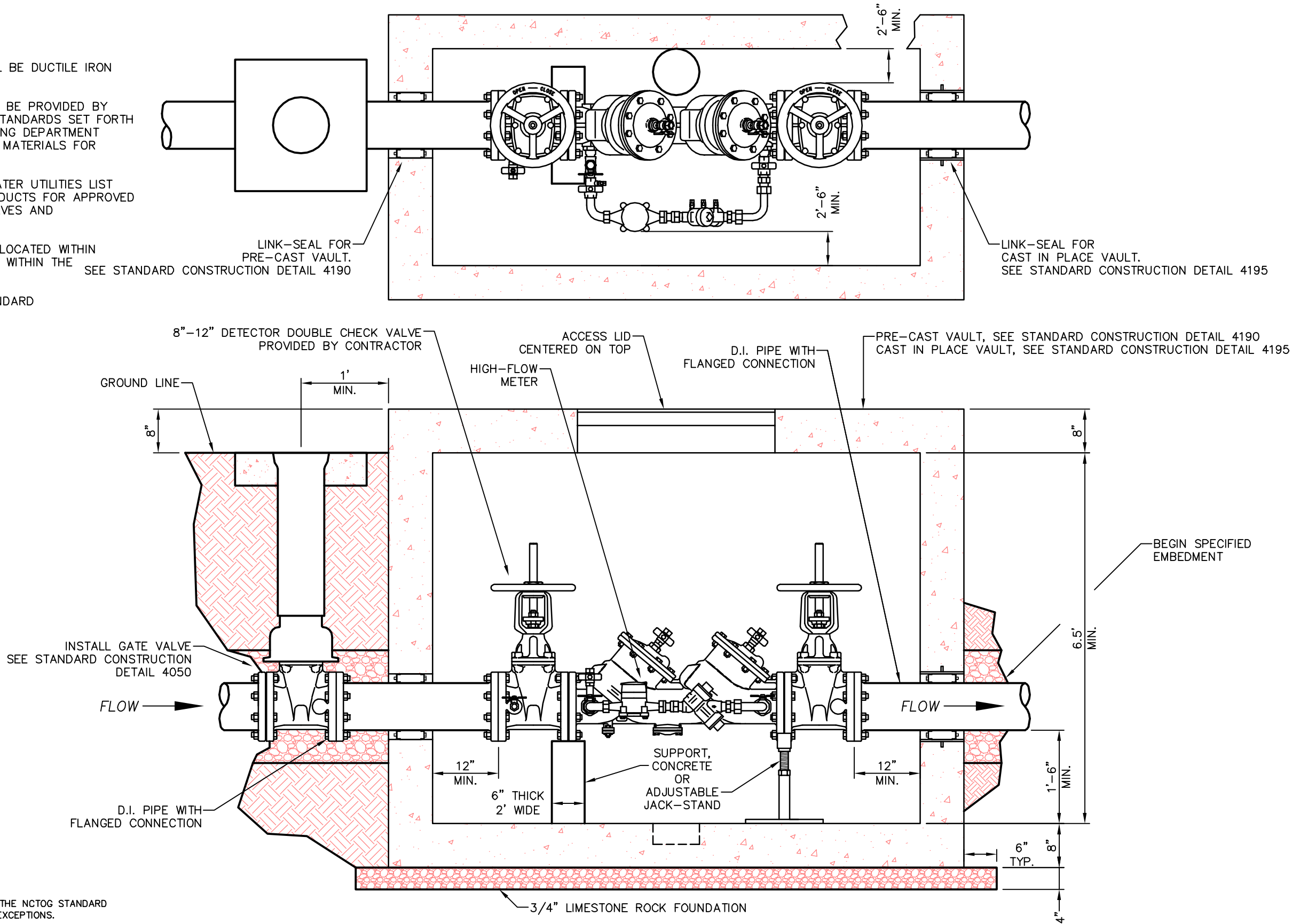
NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

PATH: S:\Standard_Details\New_Details_modified\SDCoppel2005.dwg

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 501., 502., 504.
					DETECTOR CHECK VALVE INSTALLATION 3" TO 6" SERVICE	
NO.	LOCAL EXCEPTION	BY	DATE			CITY OF COPPELL DALLAS COUNTY, TEXAS

NOTES:

1. ALL PIPING INSIDE THE VAULT SHALL BE DUCTILE IRON WITH FLANGED FITTINGS.
2. THE DETECTOR CHECK VALVE SHALL BE PROVIDED BY THE CONTRACTOR AND MEET THE STANDARDS SET FORTH IN THE CITY OF COPPELL ENGINEERING DEPARTMENT LIST OF APPROVED PRODUCTS AND MATERIALS FOR PUBLIC WORKS CONSTRUCTION.
3. REFER TO THE CITY OF COPPELL WATER UTILITIES LIST OF APPROVED MATERIALS AND PRODUCTS FOR APPROVED BRANDS AND MODELS OF GATE VALVES AND RELATED FITTINGS.
4. VAULT AND GATE VALVE SHALL BE LOCATED WITHIN A DEDICATED UTILITY EASEMENT OR WITHIN THE PUBLIC RIGHT OF WAY. SEE STANDARD CONSTRUCTION DETAIL 4190
5. IDENTIFY VALVE LOCATION PER STANDARD CONSTRUCTION DETAIL 4220.



North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.



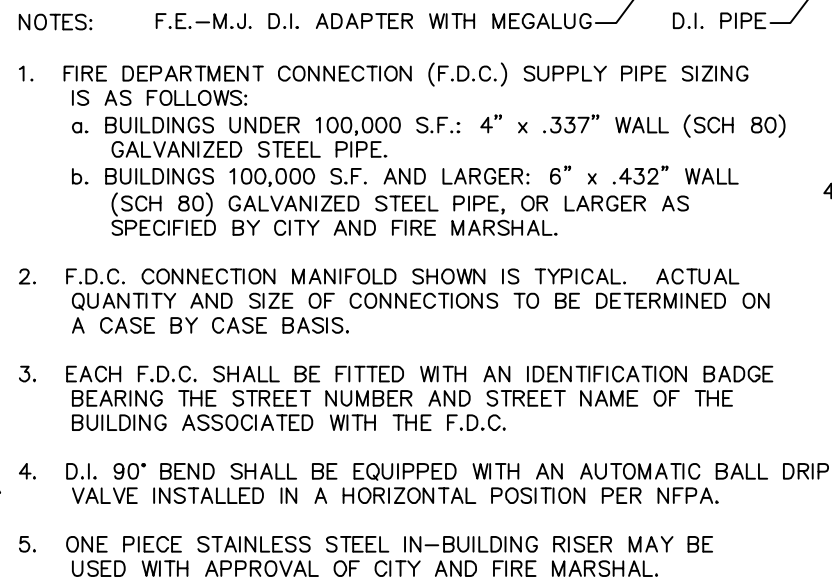
STANDARD CONSTRUCTION DETAILS
DETECTOR CHECK VALVE INSTALLATION
8" TO 12" SERVICE

CITY OF COPPELL DALLAS COUNTY, TEXAS

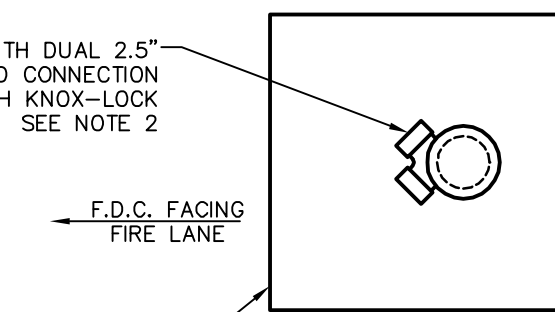
STD. SPEC.
REFERENCE
501., 502., 504.
STANDARD DETAIL

4165

NO.	LOCAL EXCEPTION	BY	DATE
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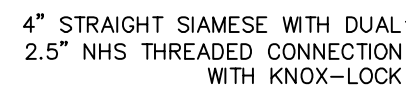
4" 90° SIAMESE WITH DUAL 2.5"
NHS THREADED CONNECTION
WITH KNOX-LOCK
SEE NOTE 2



5" STORZ CONNECTOR
WITH 11-1/4" BEND



F.D.C. SEE
NOTE 2

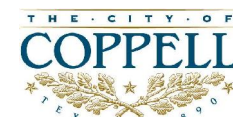


PLAN VIEW
(BUILDINGS 100K S.F. AND LARGER)
N.T.S.

ELIMINATE CHECK VALVE AND VALVE STACK. MODIFY NOTE 4.

NO.	LOCAL EXCEPTION
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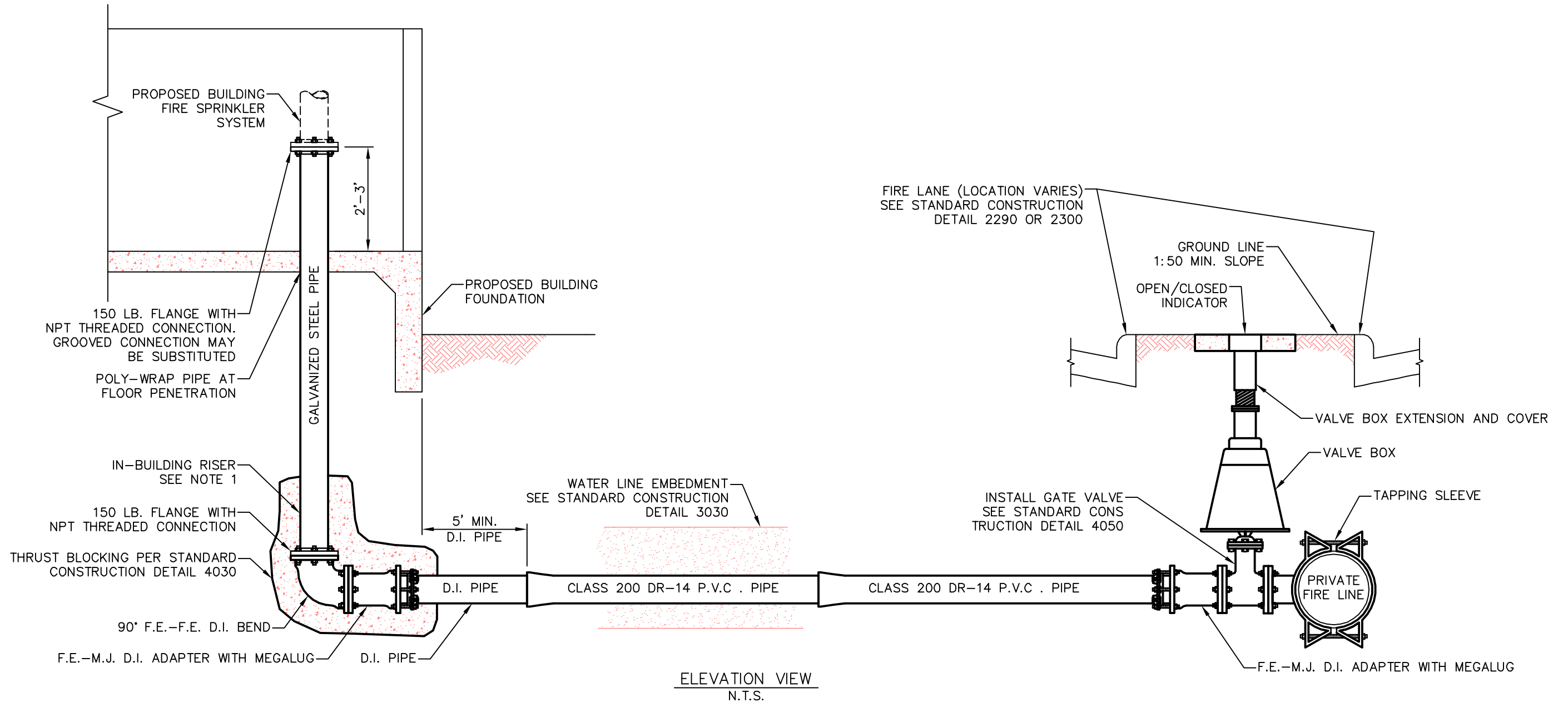
SWL	AUG. '06
BY	DATE



**FIRE DEPARTMENT CONNECTION (F.D.C.)
LOCATED OUTSIDE OF PAVING**

STD. SPEC. REFERENCE	3., 501., 502.
STANDARD DETAIL	

4170




NOTES:

- ONE PIECE STAINLESS STEEL IN-BUILDING RISER MAY BE USED WITH APPROVAL OF CITY AND FIRE MARSHAL.

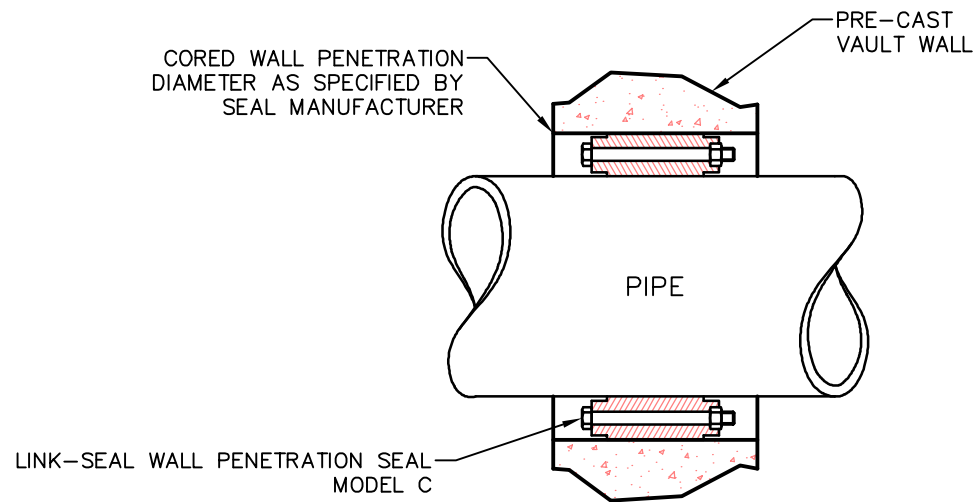
North Central Texas Council of Governments



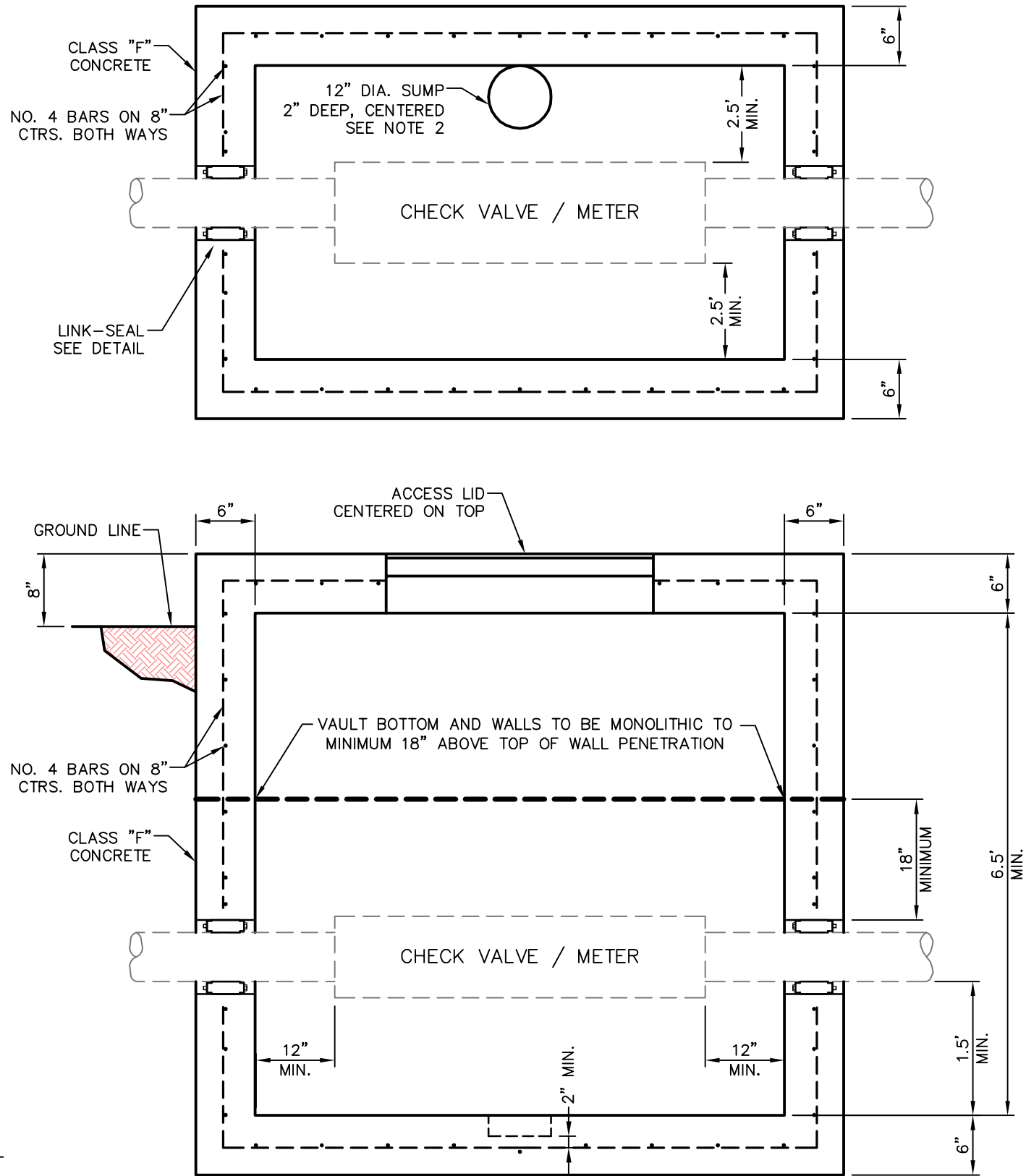
NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 501., 502.
					BUILDING FIRE SPRINKLER SYSTEM CONNECTION TO PRIVATE WATER MAIN	
NO.	LOCAL EXCEPTION	BY	DATE		CITY OF COPPELL DALLAS COUNTY, TEXAS	

- NOTES:
- 1. CONCRETE IN PRE-CAST VAULTS SHALL BE 6" THICK CLASS "F", REINFORCED WITH #4 BARS ON 8" CENTERS EACH WAY. THESE ARE MINIMUM SPECIFICATIONS.
 - 2. A SUMP 2" DEEP x 12" IN DIAMETER SHALL BE INSTALLED TO ONE SIDE OF, AND CENTERED IN, THE BOTTOM SLAB OF THE VAULT. A RECTANGULAR SUMP OF SIMILAR VOLUME IS ACCEPTABLE.
 - 3. THE VAULT SHALL NOT BE INSTALLED IN ANY PAVED AREA AND MUST BE LOCATED WITHIN A DEDICATED UTILITY EASEMENT OR WITHIN THE PUBLIC RIGHT OF WAY.
 - 4. A DRAWING WITH THE EXACT MEASUREMENTS OF THE VAULT SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
 - 5. THE VAULT LID SHALL BE A BILCO TYPE Q-4 3'x 3' SINGLE LEAF DESIGN WITH 1/4" x 3" ANGLE STEEL FRAME AND BOLTED EXTERIOR STRAP ANCHORS. THE LEAF SHALL BE 1/4" STEEL DIAMOND TREAD PLATE, PIVOTING ON TORSION BARS. MINIMUM LIVE LOAD CAPACITY IS 150 LBS. PER S.F. A LOCKING HASP AND RING SHALL BE PROVIDED.
 - 6. VAULT LID SHALL BE PAINTED WITH MED. BLUE ENAMEL.
 - 7. WALL PENETRATIONS SHALL BE SEALED WITH A "LINK-SEAL" MODEL C SEGMENTED RUBBER SEAL. WALL PENETRATION SHALL BE CORE DRILLED; JACK HAMMERING OR CHIPPING IS NOT PERMITTED. DIAMETER SHALL BE AS RECOMMENDED BY SEAL MANUFACTURER FOR THE PIPE SIZE IN THE VAULT.
 - 8. VAULT BOTTOM SHALL HAVE A MINIMUM 6" WALL LIP RECESS; FLAT BOTTOM VAULTS ARE NOT ACCEPTABLE. VAULT WALLS WITH THIN-WALL KNOCKOUTS OR "DOG HOUSE" PENETRATION OPENINGS ARE NOT ACCEPTABLE.
 - 9. INTERIOR VAULT DEPTH SHALL BE A MINIMUM OF 6'-6".
 - 10. CASTING DATE SHALL BE STENCILED OR STAMPED ON VAULT INTERIOR.



WALL PENETRATION AND LINK-SEAL DETAIL
N.T.S.



North Central Texas Council of Governments

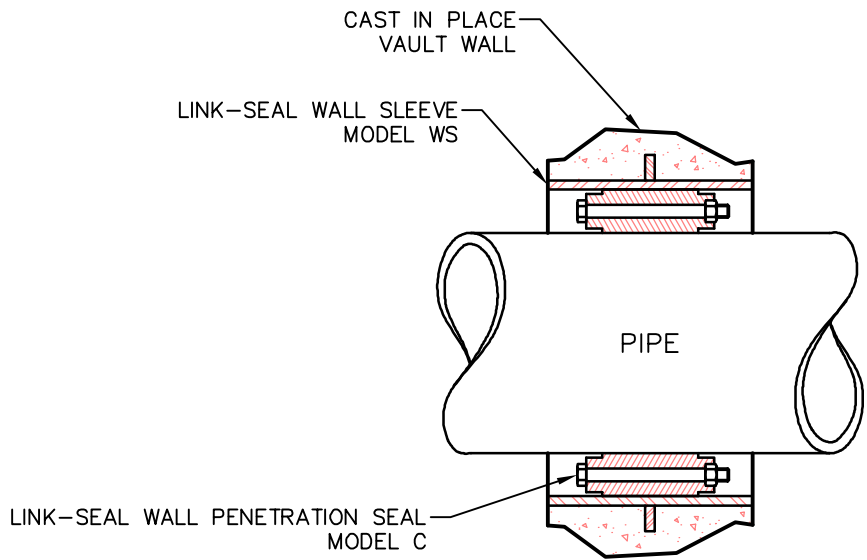


NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

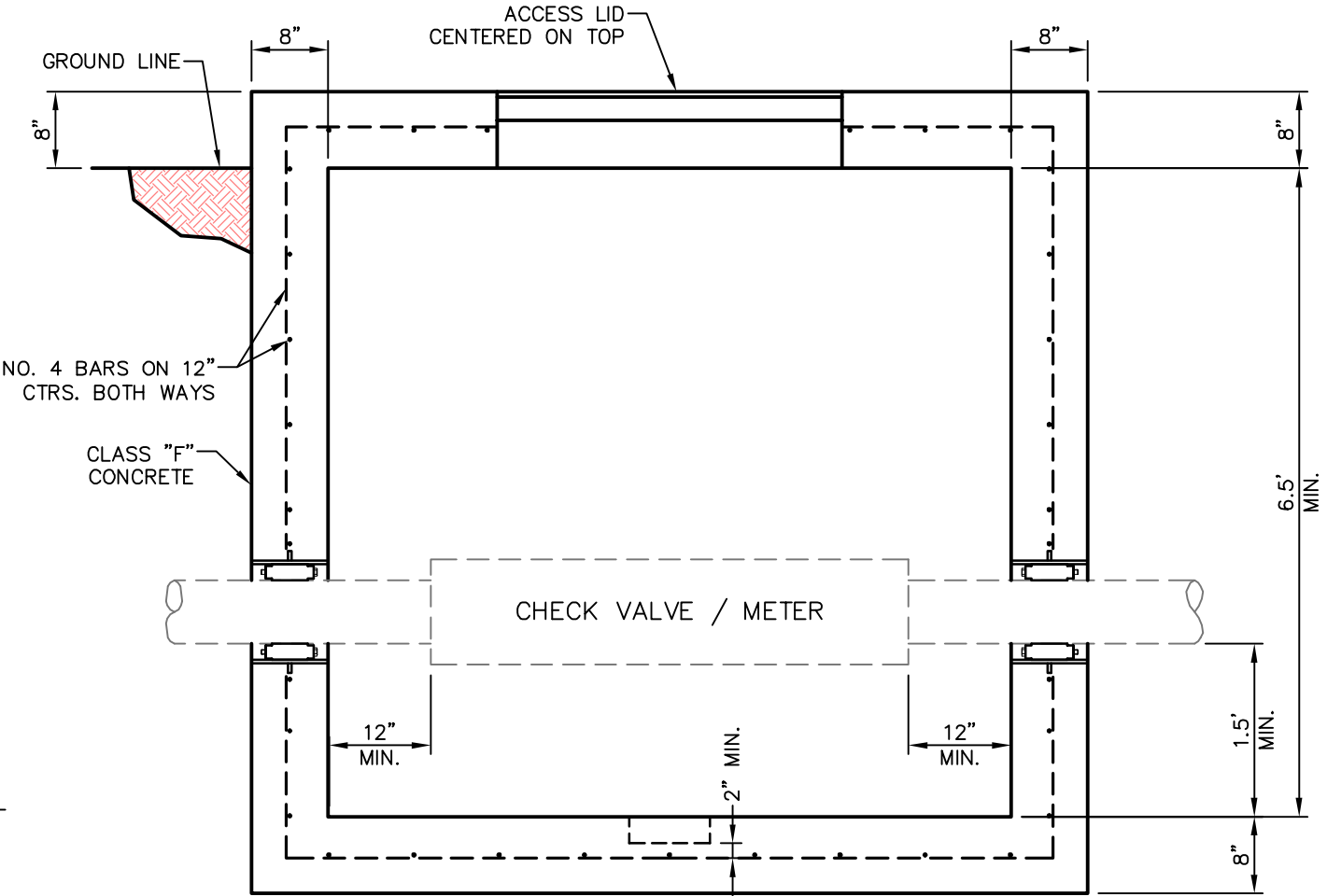
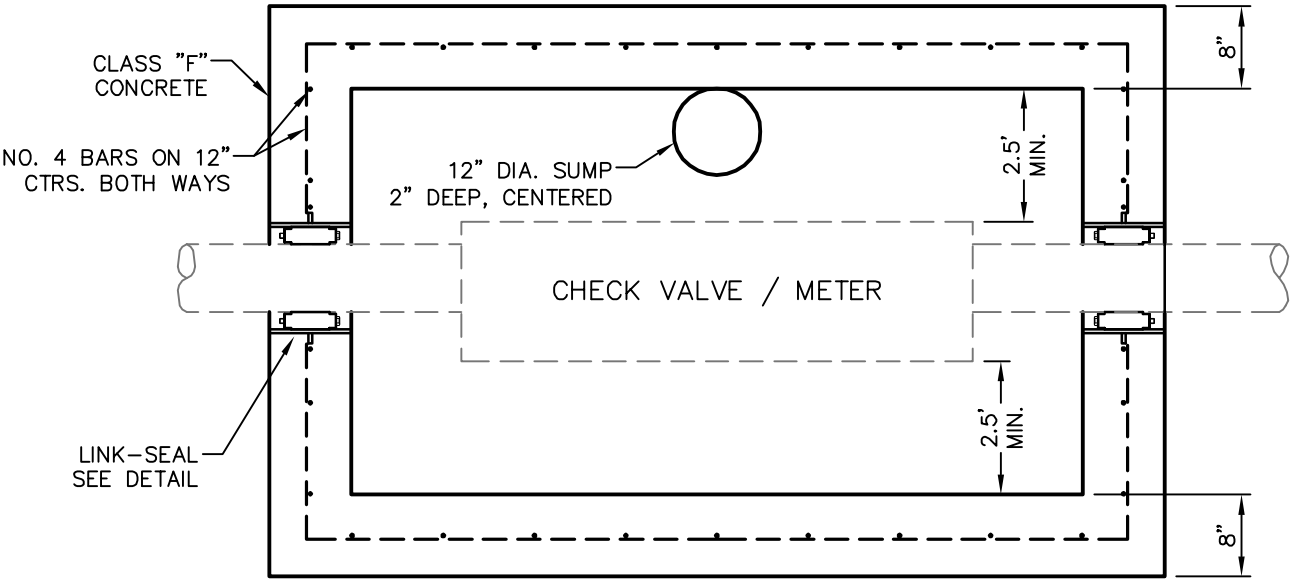
					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 702.
					DETECTOR CHECK VAULT PRE-CAST CONSTRUCTION	
NO.	LOCAL EXCEPTION	BY	DATE			CITY OF COPPELL DALLAS COUNTY, TEXAS

NOTES:

1. CONCRETE IN CAST IN PLACE VAULTS SHALL BE 8" THICK CLASS "F", REINFORCED WITH #4 BARS ON 12" CENTERS EACH WAY. THESE ARE MINIMUM SPECIFICATIONS.
2. A SUMP 2" DEEP x 12" IN DIAMETER SHALL BE INSTALLED TO ONE SIDE OF, AND CENTERED IN, THE BOTTOM SLAB OF THE VAULT.
3. THE VAULT SHALL NOT BE INSTALLED IN ANY PAVED AREA AND MUST BE LOCATED WITHIN A DEDICATED UTILITY EASEMENT OR WITHIN THE PUBLIC RIGHT OF WAY.
4. A DRAWING WITH THE EXACT MEASUREMENTS OF THE VAULT SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
5. THE VAULT LID SHALL BE A BILCO TYPE Q-4 3'x 3' SINGLE LEAF DESIGN WITH 1/4" x 3" ANGLE STEEL FRAME AND BOLTED EXTERIOR STRAP ANCHORS. THE LEAF SHALL BE 1/4" STEEL DIAMOND TREAD PLATE, PIVOTING ON TORSION BARS. MINIMUM LIVE LOAD CAPACITY IS 150 LBS. PER S.F. A LOCKING HASP AND RING SHALL BE PROVIDED.
6. THE LID SHALL BE PAINTED WITH MED. BLUE ENAMEL.
7. WALL PENETRATIONS SHALL BE SEALED WITH A "LINK-SEAL" MODEL C SEGMENTED RUBBER SEAL AND MODEL WS PENETRATION SLEEVE. THE SLEEVE SHALL BE IN POSITION AT THE TIME THE WALL IS POURED.
8. INTERIOR VAULT DEPTH SHALL BE A MINIMUM OF 6'-6".



WALL PENETRATION AND LINK-SEAL DETAIL
N.T.S.




North Central Texas Council of Governments

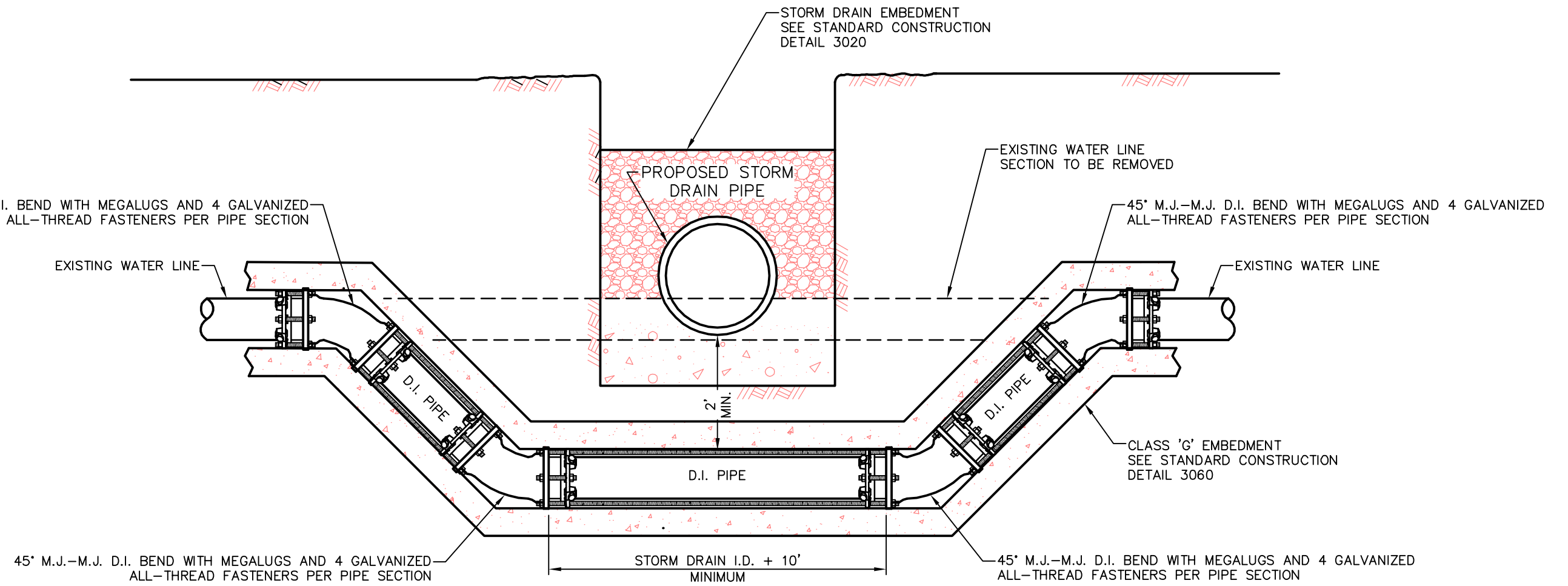


NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

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					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 702.
					DETECTOR CHECK VAULT CAST-IN-PLACE CONSTRUCTION	
NO.	LOCAL EXCEPTION	BY	DATE			CITY OF COPPELL DALLAS COUNTY, TEXAS

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NOTE:
ALL D.I. PIPE SHALL BE POLYWRAPPED PRIOR TO EMBEDMENT

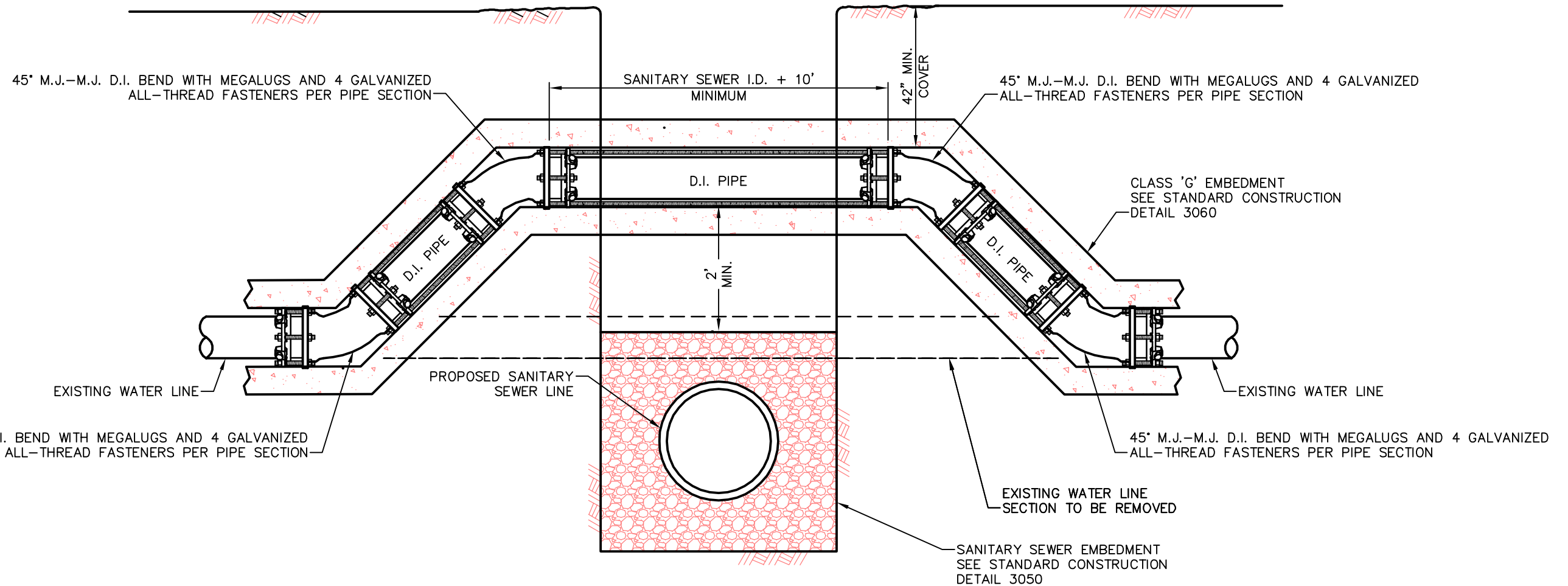
North Central Texas Council of Governments



NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD
DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE
					WATER MAIN ADJUSTMENT	501., 504.
					AT STORM DRAIN CROSSING	STANDARD DETAIL
						4200
NO.	LOCAL EXCEPTION	BY	DATE		CITY OF COPPELL DALLAS COUNTY, TEXAS	

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NOTES:

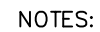
1. ALL D.I. PIPE SHALL BE POLYWRAPPED PRIOR TO EMBEDMENT
2. WATER LINE AND SANITARY SEWER LINE SEPARATION SHALL CONFORM WITH T.C.E.Q. REGULATIONS.

North Central Texas Council of Governments

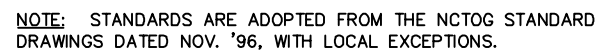




NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE 501., 504. STANDARD DETAIL 4210
NO.	LOCAL EXCEPTION	BY	DATE		CITY OF COPPELL DALLAS COUNTY, TEXAS	




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					STANDARD CONSTRUCTION DETAILS WATER VALVE LOCATION AND IDENTIFICATION CURB LETTERING AND COLOR CODING CITY OF COPPELL DALLAS COUNTY, TEXAS	STD. SPEC. REFERENCE 804. STANDARD DETAIL 4220
	CHANGED SIZE OF CONCRETE PAD.	SWL	JUL. '06			
NO.	LOCAL EXCEPTION	BY	DATE			


WATER DISTRIBUTION
TESTING REQUIREMENTS

1. ALL WATER LINES FOUR (4) INCHES (") DIAMETER AND LARGER ARE TO BE HYDROSTATICALLY TESTED AT ONE HUNDRED AND FIFTY (150) PSI (POUNDS PER SQUARE INCH) FOR FOUR (4) HOURS CONTINUOUS.
2. ALL FIRE WATER LINES FOUR (4) INCHES (") DIAMETER AND LARGER ARE TO BE HYDROSTATICALLY TESTED AT TWO HUNDRED (200) PSI (POUNDS PER SQUARE INCH) FOR FOUR (4) HOURS CONTINUOUS.
3. THE CONTRACTOR SHALL STERILIZE THE INSTALLED PIPE SYSTEM BY THE INJECTION OF A CHLORINE SOLUTION OF SUCH A STRENGTH TO OBTAIN A CHLORINE SOLUTION TO WATER RATIO OF FIFTY (50) PARTS PER MILLION (PPM) THROUGHOUT THE INSTALLED PIPE SYSTEM.
4. THE CHLORINE SOLUTION SHALL REMAIN IN THE INSTALLED PIPE SYSTEM FOR TWENTY-FOUR (24) HOURS, AFTER WHICH THE CONTRACTOR SHALL FLUSH AND FILL THE SYSTEM WITH POTABLE WATER.
5. AFTER THE SYSTEM HAS BEEN FLUSHED, TESTED AND APPROVED BY THE CITY INSPECTOR FOR A NOMINAL CHLORINE RESIDUE, THE CONTRACTOR SHALL TAKE WATER SAMPLES (1 PER 1000 LF) IN THE PRESENCE OF THE CITY INSPECTOR. THESE SAMPLES NORMALLY WILL BE AT EACH END OF THE PROJECT WITH ADDITIONAL SAMPLES AT EACH DEAD END OR AS DEEMED NECESSARY BY THE CITY INSPECTOR. THE CONTRACTOR SHALL SUBMIT THE SAMPLES TO A CITY APPROVED TESTING LABORATORY. THIS LABORATORY SHALL PERFORM TESTS AS REQUIRED BY STATE HEALTH CODES PERTAINING TO POTABLE WATER. SHOULD THESE TESTS SHOW THE SAMPLES PROVIDED ARE NOT ACCEPTABLE FOR POTABLE WATER (COLIFORM, ORGANISMS, SILT, ETC.), THE CONTRACTOR SHALL FLUSH AND/OR RE-STERILIZE THE UNDERGROUND PIPING SYSTEM. RE-SAMPLING SHALL BE REQUIRED. THE COST OF ALL LABORATORY TESTING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. TRENCH COMPACTION TESTING SHALL BE PERFORMED AT THE RATE OF ONE (1)  DENSITY TEST PER THREE HUNDRED (300) LINEAR FEET (LF) PER 12" LIFT, AND MINIMUM REQUIREMENTS FOR DENSITY SHALL BE NINETY-FIVE (95) PERCENT (%) OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698.
7. MOISTURE CONTENT OF THE MATERIAL SHALL BE FROM OPTIMUM MOISTURE CONTENT TO PLUS FOUR (4) PERCENT (%) ABOVE OPTIMUM MOISTURE CONTENT.

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NOTE: STANDARDS ARE ADOPTED FROM THE NCTOG STANDARD DRAWINGS DATED NOV. '96, WITH LOCAL EXCEPTIONS.

					STANDARD CONSTRUCTION DETAILS	STD. SPEC. REFERENCE
					WATER DISTRIBUTION TESTING REQUIREMENTS	
	ADD 12" LIFT.		SWL	JUL. '06	CITY OF COPPELL DALLAS COUNTY, TEXAS	STANDARD DETAIL 4230
NO.	LOCAL EXCEPTION		BY	DATE		

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